The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 677.—Vol. XVIII. LONDON, SATURDAY, AUGUST 12, 1848. [Price 6d.

Stannaries of Cornwall—In the Vice-Warden's Court.

COOMBE *v.* BICE. | BURGESS *v.* ALDERSON.

WHEREAS the VICE-WARDEN did, by an ORDER, or DECREE, made in the above-mentioned causes, and bearing date the 10th day of May last, Order and Decree that a SALE be made of the ORES and HALVANS, and (if necessary) the ENGINES, MACHINERY, and MATERIALS upon and belonging to ROCKS CONSOLIDATED TIN MINES, in the parishes of ROCHE and S. AUSTLE, within the said Stannaries, under the direction of the Registrar of the Court, and that the proceeds of such sale should be applied by the said Registrar in the manner directed by the same Order or Decree,—

Notice is hereby given, that, pursuant to the said Order or Decree, a PUBLIC AUCTION will be HOLDEN at ROCKS MINES aforesaid, on Wednesday, the 6th day of September next, and following day, at Eleven o'clock in the forenoon of each day, for SELLING, either together or in lots, the under-mentioned

MINING MACHINERY AND MATERIALS—viz.: 1

1 70-inch cylinder STEAM-ENGINE, without boiler.
1 40-inch cylinder ditto, with two boilers complete, and 18 heads of stamps.
A machine for drawing tinstuff, with 2 20-ft. diameter iron fly-wheels, 6 inches round; a water-drawing machine, with 20-feet water-wheel, 3 feet abreast; 1 capstan and shears, with 60 fathoms of 10-inch capstan rope complete; 130 fathoms of tram-road iron, and wood stands; 3 horse-whims, with shaft tackle complete; 70 fathoms of 6-inch by 7-inch flat-rods; 27 fathoms 4-inch iron flat-rods; 1 large angle-bob; 1 small ditto ditto; 1 9-inch plunger-pole and bottom; 7 fathoms of 12-inch plunger-lift, complete; 16 fathoms of 12-inch plunger-lift, complete; several fathoms of 13, 12, 9, and 7-inch pumps; 1 8-inch and 1 6-inch working barrel; 7 fathoms of 9-inch main rods; 110 fathoms of 12-inch launders and stands; 14 fathoms of 2-inch iron bucket-rods; 7 buddles, with wood floors; 1 pair of yokes; 20 fathoms of 20-inch launders, and 10 fathoms of 5-inch ditto; 70 fathoms of 6-inch rope, with a wood-built house, and other machinery complete; 30 fathoms of whim rope; 35 fathoms of 4-inch rope; 10 fathoms of 4-inch rope; 10 fathoms of 3-inch rope; 2 single iron blocks; two double ditto; 1 treble ditto; hand-screw; several fathoms of iron chain; 2 smiths' anvils; 1 smiths' vice; smiths' horse; 3 pump buckets; 1 40-inch smiths' bellows; a quantity of brass; beam, and scales, and weights; screwing-tools and block; 10 sieves and 4 bottoms; horse-whim kibbles; wheel-barrows and hand-barrows; tram-road waggon; 2 bucket-joints; mandril; 3 or 4 tons of old iron, and about 6 tons of cast-iron; a large number of pulleys and frames; a lot of smiths and miners' tools; also,

THE ACCOUNT-HOUSE FURNITURE.

Together with a large quantity and great variety of other materials in general use in mines.—For viewing the same, application may be made to Mr. M. Teague, on the mine; and for further particulars (if by letter, prepaid) to Mr. Chilcott, solicitor, Truro; or to Mr. Stokes, solicitor, Truro.

Dated, Registrar's Office, July 31, 1848.

ILAM MOOR MINE, near ILAM, in the county of STAFFORD.—GEORGE WHITE has received instructions from the proprietors to SELL, BY AUCTION, on Thursday, the 17th of August, 1848 (without reserve), the whole of the 2

MACHINERY, MINE MATERIALS, &c.,

at the above mine, comprising—TWO PAIRS HORSE-WHIMS, with joppet heads, ropes, and chains complete, in good condition.

Wood and iron buckets, miners' dial and box, from 600 to 700 feet of ash and elm timber, in the round—in lots.

Wheal-barrows, gig-tub, pole and sieve, blacksmith's bellows, and anvil, ladders, old iron, one horse cart (nearly new), three sets of horse gearing, with sundry other effects.

Sale to commence at Ten o'clock in the forenoon.

WEST BASSET.—TO BE SOLD BY PUBLIC AUCTION, at the MINE, on Monday, the 28th inst; at Three o'clock in the afternoon, in one lot, all that MINE, called WEST BASSET, and the MATERIALS thereon, consisting of a 36-inch cylinder STEAM-ENGINE, with boiler, about 10 tons; 100 fathoms of 10-inch pitwork, and a variety of other articles, all in good condition. 3

The mine is situate in the parish of Illogan, in the county of Cornwall—west of South Wheal Basset—north of and adjoining South Wheal Francis.

For inspection of the mine and materials, apply to the agent thereon; and for further particulars, to Captain William Richards, Redruth.

Dated August 8, 1848.

FLINTSHIRE.—TO BE SOLD, BY PRIVATE TREATY, all those FREEHOLD LEAD and ALKALI WORKS, situate at FLINT, in the county of Flint.

The LEAD-WORKS contain smelting-furnaces, slag-hearths, refineries, crushing-mills, red lead ovens, with grinding apparatus for eight ovens, &c., and one of the finest rolling-mills in the kingdom, nearly new, with width of rolls of 9 ft. 2 in.; three steam-engines stand on the premises, which have also the advantage of water-power, by means of a reservoir, supplied by a large stream of water, working two wheels.

The ALKALI-WORKS consist of lead chambers, furnaces, vats and pans, &c., complete, and are adapted for the manufacture of 30 tons of soda ash per week. 4

The whole premises, which are freehold of inheritance, embrace about 8 acres of land, and stand on one of the deepest points of the River Dee, where vessels of large size can lie in safety; and, by means of a wharf and crane, can be laden and unladen with the greatest facility.

Coal is brought to the doors of the furnaces, by a railway from adjacent collieries.

A good turnpike-road, and the Chester and Holyhead Railway, run through the property—the latter having a station at a distance of about 200 yards; and, altogether, the situation of the premises cannot be surpassed, and stands unequalled for the beneficial carrying on of a great and extensive business.

The recent expiration of Mr. Pattinson's patent, for the desilverising of lead, affords great advantage, and makes the present a valuable opportunity for the profitable investment of capital.

The foregoing premises formed the well-known and long-established works of the late firm of George Roskell & Co.; late deaths of proprietors have rendered it necessary to have the same disposed of.

For all further particulars, and to treat, apply to George Potts Roskell, Esq., Stockyn, Holywell, Flintshire; Mr. Williamson, solicitor, Holywell; or to Mr. Wm. Williamson, solicitor, Holywell.

A good house on the premises, with spacious offices and stable.

Holywell, July 22, 1848.

TO BE SOLD, OR LET, a valuable COAL MINE, in the township of GREAT HARWOOD, in the county of Lancaster. The mine has been recently proved, and found to be 3 feet 2 inches in thickness, and of excellent quality; it is commonly called, or known, by the name of the UPPER MOUNTAIN MINE, and extends over about 1000 statute acres, which will be divided into suitable lots. 5

The property is situated between the towns of Blackburn and Clitheroe, and is intersected by a branch of the East Lancashire Railway.

A section of the borings may be seen, by applying to Mr. Boosie, Rufford-hall, Ormskirk; or to Mr. Whittle, coal viewer, Charnock Richard, Chorley—to either of whom proposals may be sent.

LEAD MINE.—To be SOLD, the GOODWILL of the UNEXPIRED LEASE of the MINEFIELD LEAD AND COPPER MINE, in GLEN CRERAN, in Argyleshire, with the MACHINERY, &c.

This Mine is conveniently situated at the head of Loch Creran, and yields ores of argentiferous galena, copper, and brown blende, and is presently in good working condition.

The working vein may be traced over a large extent of ground; and very promising lead ore was recently discovered, and partially opened up, at about 300 fathoms from the present workings, but in the same vein. 6

There is a powerful CRUSHING MILL, and complete set of WASHING APPARATUS, with MINERS' HOUSES, CARPENTERS' and BLACKSMITHS' SHOPS, OFFICE, &c., at the mine; and, as the lessee wishes to be wholly quit of business connections, the whole will be disposed of on liberal terms.

Offers may be made to Mr. Burgess, at Minefield, by Appin, N.B., who will afford every facility for inspecting the mine.—Minefield, July 25, 1848.

TO CAPITALISTS, COAL MERCHANTS, AND OTHERS—PARKGATE.—TO BE LET, a very extensive and valuable COAL-FIELD situated upon the property of the Hon. E. M. D. Mostyn, M.P., in the vicinity of PARKGATE, in CHESHIRE.—The above coal-field, which has been sufficiently proved, may, from its short distance from the River Mersey and Birkenhead, from the moderate depth at which the coal lies, and consequent easy cost of working it, be expected to enter into successful competition in the supply of coal for Liverpool, with the St. Helens and other districts, from whence that town is at present supplied. 7

For further particulars, apply to Mr. John Lancaster (of Wigan), Mostyn Collieries, Holywell; or Messrs. Williams and M'Leod, Temple, London.

DUKE OF PORTLAND'S TROON COAL—Edinburgh, August 1, 1848.—These are to intimate, that Messrs. ARCHIBALD FINNIE and SON, of KILMARNOCK, have now become the SOLE LESSEES of His Grace the DUKE OF PORTLAND'S KILMARNOCK COLLIERY, and the ONLY SHIPPERS of the Duke's COAL at TROON. 8

JAMES M. MELVILLE,
Commissioner for His Grace the Duke of Portland.

With reference to the prefixed, Messrs. ARCHIBALD FINNIE and SON take this opportunity of intimating, that their NEW PITS are producing COAL, which has proved to be superior to any hitherto shipped from His Grace's collieries. Great care is given to secure the proper working, and particularly the due screening of the coals; and, by improvements being effected on the loading apparatus at the harbour, the fatigue of shipment, and consequent breakage and dust on the cargoes will be, in a great measure, avoided.

The harbour of Troon is of easy access—large and commodious; and having recently been very much improved, is capable of receiving first-class ships, of the largest tonnage, with perfect safety, in all weathers—the new basin containing 20 feet of water at the lowest ebbs. The port charges are very moderate; there are also excellent graving docks in the harbour.

Agent at Troon ..... Mr. Alex. Paton, Duke of Portland's Colliery Office, Kilmarnock, August 2, 1848.

AMMONIACAL LIQUOR—LIVERPOOL UNITED GAS LIGHT COMPAAY.—Persons desirous of PURCHASING, for a term of one, three, or five years, the AMMONIACAL LIQUOR which may be generated at the several stations of this company in Liverpool, are requested to SEND in their TENDERS, addressed to the directors, on or before Monday, the 21st inst.—Further particulars may be had on application to Mr. Alfred King, the company's engineer, or to 9

HENRY STEEL, Treasurer and Manager.

Gas Office, Dale-street, Liverpool, August 1, 1848.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY, 10

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

ASSAYING.—Mr. R. F. MUSHET (son of the late eminent metallurgist, David Mushet, Esq.) ASSAYS IRON ORES and IRONSTONES, of all descriptions, at the charge of 7s. for each assay—giving the metallic contents of each ore with perfect accuracy.—Address: Coleford, Gloucestershire. 12

VENTILATION OF COAL MINES—BIRAM'S PATENT ANEMOMETER.—This INSTRUMENT has now been SUCCESSFULLY EMPLOYED by many eminent engineers, to whom reference can be given. 13

For particulars, apply either to the inventor, B. Biram, Esq., Wentworth, near Rotherham; or to the maker, John Davis, Derby, manufacturer of miners' dials, clinometers, safety-lamps, and all kinds of instruments appertaining to the engineer, are made and kept in stock.—Repairs promptly attended to. J. DAVIS, Irongate, Derby.

FOURDRINIER'S PATENT SAFETY APPARATUS, for PREVENTING ACCIDENTS IN MINES AND OTHER PLACES, WHEN THE ROPE OR CHAIN BREAKS. 14

By the ADOPTION of this INVENTION the LIVES of the WORKING MINERS may be PRESERVED, and the PROPERTY of the MINE OWNERS PROTECTED from the serious consequences of either of the following accidents—viz.:

1. From the men, or the load, being precipitated to the bottom of the shaft when the rope or chain breaks: in this case the apparatus is *self-acting*.
2. From either the men, or load, being drawn over the pulley: in this case, also, the apparatus is *self-acting*.
3. From the fearful consequences to men or load of a "whirl," or run: in this case the result is equally *certain*.

A COAL PIT, with the SAFETY APPARATUS ATTACHED to the CAGE, is daily at WORK near BURSLEM, in the STAFFORDSHIRE POTTERIES.

To inspect the apparatus, or to obtain any further information, application may be made to Mr. Edward N. Fourdrinier (the patentee), Cheddleton, near Leek, Staffordshire; or to Mr. Joseph Fourdrinier, 9, College-place, Camden Town, London—who are prepared to GRANT LICENSES for the USE of the PATENT.

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.* 24

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

GALVANISED IRON COMPANY'S DISSOLUTION ACT, 1848.—Notice is hereby given, that the directors on the 24th day of July, 1848, made a CALL of TWO POUNDS per share, pursuant to the "Galvanised Iron Company's Dissolution Act, 1848," in respect of so many of the 25,000 and 20,407 shares respectively mentioned in that Act as then existed; and that the same call was made payable by the respective holders of the said shares on the 10th day of August then and now next at the bank of Messrs. Prescott, Grote, and Co., 62, Threadneedle-street, London, and was and is to be applied for the payment of the debts, liabilities, and engagements of the said company then existing, and those duly incurred in carrying the said Act into execution; and Notice is hereby further given, that the directors, on the 31st day of July, 1848, adopted and confirmed the said call of TWO POUNDS per share, but postponed the day fixed for payment thereof until the 18th day of August, 1848—and they resolved that the same should be payable on the said 18th day of August, 1848, by the respective holders of the said shares at the said bank; and notice is hereby also given, that if the said call, or £2 per share, be not paid on or before the said 18th day of August, 1848, being the day fixed for payment thereof, interest, after the rate of £5 per centum per annum, will be payable on each £2 per share, from the said 18th day of August, 1848 (being the day fixed), up to the time when the said call shall be actually paid; and that if the said call, or £2 per share, be not paid within three calendar months next after the day fixed for the payment thereof, all the shares in respect of which default shall be made belonging to the person making such default, and all benefit thereof, will be liable to be forfeited. By order, 15

3, Mansion-house-place, London, July 31, 1848. S. VINCENT, Secretary.

CAMERON'S COALBROOK STEAM-COAL & SWANSEA AND LOUGHOR RAILWAY COMPANY.

Registered and Incorporated under 9 and 10 Victoria, cap. 401.

Report of the Directors of the Railway Company, submitted to the Annual General Meeting of Shareholders, held at the Company's Offices, 2, Moorgate-street, London, on Friday, the 28th July, 1848, at 1 o'clock, afternoon:— 16

Since the last report of the directors on this subject, on the 31st January, 1848, they have been advised to defer all measures, or incurring any expense in connection therewith; and have, as stated in their separate report of this date, proceeded with preliminary measures to acquire railway transit to the port of Llanelly.

They are the more influenced in this respect by the delay anticipated in the erection of docks at Swansea, and the continued delay in opening the South Wales Line.

The General Railway Act, passed in 1847, extends the time within which to complete this company's line for two years from August, 1849; and the directors are still of opinion, that the expense of procuring the Act, and contingent expenses in relation thereto, will be fully repaid when the line is constructed, as it cannot fail ultimately to be the principal line for traffic to the port and docks of Swansea.

Approved by the Board of Directors. N. P. CAMERON, Chairman.

CAMERON'S COALBROOK STEAM COAL & SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Registered and Incorporated.)

Notice is hereby given, that, in pursuance of a resolution of the board of directors, made on the 2d day of August inst., in virtue and pursuance of a resolution of an extraordinary general meeting of shareholders, made on the 28th day of July, 1848, the proprietors of shares in this company are hereby required to PAY a CALL of ONE POUND on each of their respective shares, on or before the 12th day of October next, to the company's bankers, the Commercial Bank, Lothbury, London. 17

Interest, at the rate of 5 per cent. per annum, will be charged upon all calls remaining unpaid, from and after the said 12th day of October next; and all shares on which such call shall not be paid, are liable to forfeiture, according to tha provisions of the Deed of Settlement. By order of the board of directors,

Offices, 2, Moorgate-street, London, August 8, 1848. A. C. HOWDEN, Sec.

CORNWALL NEW MINING COMPANY.

Capital £100,000, divided into 20,000 shares, of £5 each.

Deposit, £1 per share.

Three further calls, of 10s. per share, at 6, 12, and 18 months.

Incorporated in pursuance of the Statute of 7 and 8 Victoria, cap. 110. 18

BANKERS—London and County Bank, 21, Lombard-street.

The CORNWALL NEW MINING COMPANY is ESTABLISHED to WORK a series of TIN and COPPER MINES, chiefly in the district of ST. IVES, which has hitherto afforded a larger profit on its return of ore than any other part of the county.

In pursuance of this plan, five have been already selected—viz.: Georgia Tin Mines, Trewortha Tin and Copper Mine, Bray Tin and Copper Mine, Trevarno Tin and Copper Mine, and Wheal Squire Tin and Copper Mine—with whose owners the directors have succeeded in making such advantageous arrangements, as to enable them to work one or more with even a small portion of the proposed capital.

The directors beg to announce, that they are NOW ALLOTING the SHARES in the above company; and, from the number already disposed of, they request parties desiring to take shares to make early application. Those to whom allotments have been made, are requested to pay their deposits into the bankers of the company, as above.

The Deed of Settlement having been executed by the required number of shareholders to incorporate the company, parties who now take shares will not be required to sign it, or enter into any personal liability for calls or otherwise, although reserving their full rights as shareholders.—The directors beg to draw attention to some of the leading advantages which this company offers:—

1. It avoids the disappointment so often attending operations confined to a single mine, even under the most favourable appearances, especially such as require a large outlay, to ascertain their mineral capacity.
2. It will work those mines only which are sufficiently developed to ensure a profitable return.
3. It will cease the working of mines which may not be found productive, or which may affect the general interest upon the capital.
4. It will economise the general system of management.
5. It has already obtained, under very favourable circumstances, the above mines, well-known, and carefully examined.
6. It makes the future calls small, defined, and at distant periods.
7. It ensures the certainty of an immediate return upon the capital of not less, according to the lowest calculation, of 25 to 30 per cent. per annum.
8. It ensures to every subscriber an equal certainty of not being personally liable, beyond the first deposit, although reserving all the rights of a shareholder.

Office, 17, Essex-street, Strand. GEO. LOCKWOOD, Secretary.

TO MINERAL AGENTS.—WANTED, a Person, thoroughly competent to SUPERINTEND THE UNDERGROUND DEPARTMENT of an EXTENSIVE IRON-WORK, where the seams of coal are thin, and wrought under the long-work system. None but those who have been accustomed to this system will be treated with. Undeniable references, as to character and ability, will be required. 19

Apply (by letter, post-paid) to G. G., Post-office, Birmingham, stating age, and where previously employed.

MANAGER OF A COLLIERY.—The ADVERTISER, who has been all his life practically engaged in working coal-pit sinking and pumping water—is a good draughtsman, and thoroughly acquainted with the making and fixing up of all kinds of mining machinery—is in WANT of a SITUATION, in ENGLAND or ABROAD. First-rate references can be given.—Address "X.," care of E. W. Binns, Esq., solicitor, Manchester. 20

NOTICE TO IRONMASTERS.—Any GENTLEMAN, of practical experience in the iron-trade, and possessed of a small amount of capital, who is willing to take the MANAGEMENT of WORKS, in the WEST of SCOTLAND, and to FORM a PARTNERSHIP with PARTIES about to enter into the TRADE, under advantageous circumstances, may hear of such an opening, by communicating his name (confidentially) to Bannatynes and Kirkwood, writers, 50, West George-street, Glasgow. 21

July 26, 1848.

DEAN FOREST, GLOUCESTERSHIRE.—TO BE SOLD, A LARGE IRON MINE ESTATE.—For particulars apply to A. East, Esq., solicitor, Bell-street, Birmingham. 22

TO CAPITALISTS—SCIENTIFIC OR OTHERWISE.—WANTED, from FIVE HUNDRED to ONE THOUSAND POUNDS for securing PATENTS in FOREIGN PARTS, for several IMPORTANT INVENTIONS, about to appear before the public (for which the English patent has been obtained). Only part of the above amount is wanted immediately. Any party having the above sum at command will find this an excellent opportunity for the investment of capital, as ample security will be given, and the most liberal terms conceded to.—Apply to Mr. A. Campbell, 184, Fleet-street. 23

MINING OFFICES—Established Five Years.—THOMAS P. THOMAS begs to inform his friends and the public, that he has REMOVED from No. 18, Threadneedle-street, to No. 3, GEORGE-YARD, LOMBARD-STREET, LONDON (late Messrs. Phillips and Tiplady's). 24

N.B.—Dealer in English and Foreign Funds, Mining, Railway, Gas, and other shares.

MR. R. TREDINNICK, THREE KING'S COURT, *LOMBARD-STREET, LONDON,*

Continues to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities. 25

MR. H. B. RYE, GENERAL AGENT for the DISPOSAL of MINING PROPERTIES, invites the attention of his friends and the public to the unusually FAVOURABLE TERMS on which INVESTMENTS may now be made in MINE SHARES.—Ample information (for the guidance of buyers) may be had at his offices—80, Old Broad-street. 26

MR. JAMES STRIDE'S MINING, SHARE, AND GENERAL AGENCY OFFICES, 27, *SPRING-GARDENS, LONDON.* 27

WILLIAM W. TAYLOR & CO., MINERAL SURVEYORS MINING SHAREBROKERS, &c., 28

No. 2, ROYAL EXCHANGE-BUILDINGS, LONDON.

JAMES LANE, MINING SHARE DEALER, 29

75, *OLD BROAD-STREET, LONDON.*

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 30

MONEY.—MESSRS. KILLICK & CO. (late Winstanley, Killick, & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.—6, Bank Chambers, opposite Bank of England. 31

UNITED MEXICAN MINING ASSOCIATION.—Notice is hereby given, that a DIVIDEND of FIVE SHILLINGS per share will be PAYABLE at the office of the association, on and after Wednesday next, the 2d of August, between the hours of Eleven and Three.—Forms for claiming the dividend may be obtained at the company's office, and must be left two clear days, for examination, previous to payment. By order of a court of directors, 32

5, Finsbury-circus, London, July 26, 1848. JOHN MATHER, Secretary.

*** The holders of scrip shares will not be entitled to receive the dividend until their shares are registered.

GADAIR MINING COMPANY.—At a Special General Meeting of the adventurers in the Gadair Mining Company, held on Monday, the 7th day of August, 1848, G. W. BLANCH, Esq., in the chair. 33

The chairman having explained to the meeting the reason of the management not having been removed to Manchester, as proposed at the last meeting, and it being deemed desirable to elect a managing committee, it was moved and seconded,—

That a managing committee of three be appointed, and that the following gentlemen be nominated to such offices—G. W. Blanch, Esq., J. Truscott, Esq., and H. English, Esq.

Resolved,—That a meeting be held on the first Tuesday in every alternate month.

An offer having been made by Mr. English of the use of his offices gratuitously for the next four months, for the purposes of the company, it was

Resolved,—That the business of the company be transacted at No. 25, Fleet-street, and that Mr. English be requested to act as purser—which office was accepted—the services being rendered gratuitously by that gentleman.

Resolved,—That the company be henceforth considered as confined to 3540 shares, and that the remaining shares be cancelled.

Resolved, —That a call of 3s. per share be made on the shareholders, for liquidating the claims due on the mine—the same being payable on or before the 26th August, 1848.

Resolved,—That a call of 2s. 6d. per share be now made, for the purpose of prosecuting the mine, payable on or before 9th September next.

Resolved,—That the accounts presented this day be admitted, and that a copy of the same be transmitted to the several adventurers, with the resolutions passed at this meeting. G. W. BLANCH, Chairman.

Resolved,—That the thanks of the meeting be presented to the chairman.

TRENANCE MINES COMPANY.—At the Second Annual General Meeting of shareholders in this company, held at the offices, No. 12, Cornhill, London, on Friday, the 28th day of July, 1848, 34

GEORGE BURNAND, Esq., in the chair,

The notice convening the meeting was read, as also the report of the directors—see another column of this day's *Mining Journal*.

The accounts having been submitted—it was

Proposed by B. E. Lindo, Esq., seconded by Francis Burnand, Esq.,

That the report and accounts, now read, be received, adopted, and entered into the cost and transfer book.—Carried unanimously.

Proposed by F. Berger, Esq., seconded by J. H. Pidcock, Esq.,

That G. Burnand, Esq., be re-elected a director of this company.—Carried unanimously.

Proposed by George Burnand, Esq., seconded by John Macmeikan, Esq.,

That B. E. Lindo, Esq., be re-elected an auditor of this company; and that James Edmund Smith, Esq., be elected an auditor, in the stead of William F. Street, Esq.—Carried unanimously. GEORGE BURNAND, Chairman.

Proposed by J. Macmeikan, Esq., seconded by Francis Burnaud, Esq.,

That the cordial thanks of the meeting be given to the chairman and directors, for their zealous attention to the business of the company.

WEST WHEAL MARIA MINING COMPANY.—At a General (two-monthly) Meeting, held at the offices of the company, No. 1, St. Michael's-alley, Cornhill, on Thursday, the 10th of August, 35

CHARLES BAILEY, Esq., in the chair,

The following resolutions were carried unanimously:—

1. That the accounts, now presented, be received and adopted.
2. That the appearances of the mine not warranting any further outlay, the operations be immediately suspended.
3. That the committee of management be empowered to wind up the affairs of the company—to sell by public auction, or otherwise, the engine, materials, &c., and to dispose of the sett, and to pay off all liabilities of the company.
4. That legal proceedings be taken to recover all arrears of calls which may remain unpaid after the 21st inst.
5. That the thanks of the meeting are due, and are hereby given, to the committee of management—Messrs. J. Browne, Chas. Bailey, and J. Y. Watson.

CHARLES BAILEY, Chairman.

WEST WHEAL MARIA MINING COMPANY.—PERSONS having CLAIMS against this company (which is about to be dissolved), are requested to FORWARD PARTICULARS of the same to the committee of management, at Messrs. Watson and Cuell's, No. 1, St. Michael's-alley, Cornhill, London, that the same may be investigated and discharged.

Signed, on behalf of the committee, J. T. WATSON.

August 10, 1848.

LONDON JOINT-STOCK BANK.—A special meeting of this company was held at the banking-house, Princes-street, Bank, on Thursday last, to supply a vacancy in the direction, when Mr. W. Blunt was unanimously elected.

The Saxon and Bohemian Railway was opened on the 31st July, at Dresden, in presence of the princes, ministers, and members of both houses.

BALLS AND SHELLS FROM RUSSIA.—A vessel arrived in the river from Odessa has brought, as a portion of her cargo, 8517 balls and shells, consigned to order.

LARGE SHEARS FOR SHEERNESS DOCKYARD.—The mastmakers of this dockyard have just completed a powerful shears, formed of pieces of timber joined together in a similar manner as the made masts of first-rate ships of war in the Royal Navy. Some idea may be formed of the magnitude of the main support of the shears, when its dimensions are given, being 127 feet long, and 3 feet 1 inch in diameter on the average throughout its entire length. It contains 1300 feet of solid timber, weighing 27 tons, and required 52 pieces, each cut out of large-sized trees, and joined together with Jeffery's marine glue, of which it required 5 cwt. to coat the joinings, and it has been so uniformly applied by the workmen, that the superfluous quantity oozing from the joinings on the pieces of wood being pressed together with iron hoops, is calculated not to exceed 10 lbs. weight. The two side-shear masts are each formed of two very large trees, joined together with the same substance; and, when they are put up, will be of a most efficient description, capable of shipping and unshipping the largest masts used in the Royal Navy, and moving other great weights.

EXTRAORDINARY PHENOMENON.—In the forenoon of Monday last, about 11 o'clock, the passengers in the railway train to Methley were attracted by an extraordinary circumstance—so extraordinary, indeed, that the engine driver pulled up. The attention of the passengers was directed to a mown field. Towards the centre of this piece of ground a gush of water burst out to the height of about 12 inches. Immediately afterwards it was followed by fire and vapour to the height of about 3 feet. This extraordinary circumstance occurred about a mile from Methley.—*Doncaster Gazette.*

ANTIQUITY OF THE ELECTRIC TELEGRAPH.—In Arthur Young's Travels in France from 1787 to 1789, published at Bury St. Edmunds, in 1792, we find the following passage, which clearly points out the discovery of the principle and the practice of the electric telegraph:—"In electricity he (Mons. Lomornd) has made a remarkable discovery—you write two or three words on a paper; he takes it with him in a room, and turns a machine enclosed in a cylindrical case, at the top of which is an electrometer, a small fine pith ball; a wire connects with a similar cylinder and electrometer in a distant apartment; and his wife, by remarking the corresponding motions of the ball, writes down the words they indicate, from which it appears that he has formed an alphabet of motions. As the length of wire makes no difference in the effect, a correspondence might be carried on at any distance—within or without a besieged town, for instance; or for a purpose much more worthy, and a thousand times more harmless, between two towns prohibited or prevented from any better connection."

The Metallurgical Treatment of Ores.

By JOHN MITCHELL, Esq., M.C.S., author of *A Manual of Practical Assaying, &c. &c.*

No. XXV.—[*Continued from July 22.*]

When cobalt ores are worked for the products mentioned in our last paper, it is necessary to have at command very white and pure sand, or quartz, as well as potash of the best quality—so that the glass, formed by their fusion, may have as little tinge as possible. The ores themselves undergo a very careful mechanical preparation, by picking, stamping, and washing. The ores of cobalt contain (as shown by the analyses already cited) cobalt, arsenic, sulphur, iron, nickel, and sometimes bismuth. Of all these substances, the nickel and arsenic are the least oxidisible, and this property is taken advantage of in the separation of the nickel.

The finely stamped and washed ore is roasted in a reverberatory furnace, in order to deprive it of a portion of its sulphur and arsenic. To the furnace is attached a sublimation chamber. In case, however, the ores contain nickel, the roasting is only partial, because the oxide of that metal, which would be produced, would much deteriorate the fine blue colour which the glass, &c., ought to possess; from 3 to 5 cwts. form a charge. The roasted ore is then mixed with quartz, or sand, and potash, in certain proportions; and sometimes, in order to favour the fusion, a little arsenious acid, or metallic arsenic, is added. When the ore does not contain nickel, the principle of the above operation can be readily comprehended. By the roasting the sulphur is converted into sulphurous acid, and the arsenic into arsenious acid. The cobalt and iron remain in the state of oxides, but there is a quantity of arseniate of both metals always formed. When the ore contains nickel its separation is effected by an incomplete roasting. The imperfectly roasted ore, being submitted to the action of silica and potash, furnishes, if the operation has been well conducted, a blue glass, coloured by the cobalt, and an arseniuret of nickel, which separates. If the roasting has not been carried far enough, the arseniuret will contain a considerable quantity of cobalt; if, on the contrary, it has been carried too far, the glass will contain nickel, and its beauty of colour much impaired. In case the ore is very rich in nickel, it is better to add to it, more or less of roasted ore, and proceed at once to the fusion. Smalt contains silicates of potash and cobalt, and variable quantities of arseniate of potash, depending on the manner in which the ore has been roasted. This arseniate of potash is not essential to the constitution of smalt, but it has a great influence upon the beauty of its colour. Besides these, which may be called constituents, there are other substances present, but which are accidental—such as iron, silica, lead, &c.; most smalt contains a little oxide of nickel. The substances composing this kind of cobalt (blue) are not in a state of complete combination—for, during washing, as will be hereafter shown, a light-coloured product is obtained. It is an alkaline silicate, containing very little cobalt, and the wash-waters contain free alkali. The beauty of the colour of smalt depends upon the addition or substraction of certain matters. In general, the substances from which it is made ought to be as pure as possible. It has been remarked, that from 4 to 5 per cent. of arsenic and arsenious acids, 6 to 9 per cent. of phosphoric acid, and very small quantities of zinc, tin, antimony, or nitre, much improve the colour of smalts; whilst nickel, lead, iron, bismuth, borax, soda, the alkaline earths, alumina, felspar, fluor-spar, sulphur, &c., very much weaken and dull the tint. From this can be seen, that the success of the operation mainly depends—1, On the purity of the oxide of cobalt.—2, On that of the potash and silica—and 3, On the proportions of each ingredient.

The operations may be divided into three classes—1, The preliminary preparations—such as the purification of the quartz, or sand, the potash, and roasting the washed ore.—2, The operations in making the glass—such as the mixture of the component parts, and the fusion of the mixture; and, lastly, the preparation of the blue glass, produced by the two previous classes of operation; it is stamped, ground, washed, dried, and sifted. To form a proper mixture for fusion, an assay is made before each operation, by fusing together small weighed quantities of the materials, and carefully comparing the produce with standard specimens of glass, kept for the purpose of determining the proper shades and qualities. These assays are made with the roasted ore; the ore is roasted in a muffle, and then mixed with equal quantities of quartz and potash. Other mixtures are made at the same time, in which, for the same quantity of ore, two, three, and four parts of silica and potash are employed. These various mixtures are placed in small earthern crucibles, and exposed for two hours, to a heat sufficient to fuse the contents. When this occurs the melted matter is poured into water, and, when cold, finely pulverised, and, according to the colour of the powder, the proportions of materials are mixed for the large scale. To prepare the quartz, it is heaped up with wood, which is then lighted, and allowed to burn for from 24 to 26 hours; many tons are thus calcined at once. This process breaks up the cohesion of the quartz particles, and renders them readily separable by stamping under water. The result is a fine sand, which undergoes a fresh calcination in a reverberatory furnace. When cold it is sifted, and is then ready for use. The potash is always calcined before mixture.

When the proper proportions have been ascertained they are weighed out, and mixed very carefully in a wooden vat. The pots are made of a very refractory clay, and in the same manner, and with the same amount of care, as those employed in glass houses; the furnace is of the same kind, and contains six pots, each pot holding about ¾ cwt. The mixing vat is near the furnace, as is also another vat, filled with water, and furnished with a contrivance, by which cold water may continually run into it; the fused glass is poured into this. Soon after the introduction of the matter into the pots, the openings are closed with plates of iron. The fusion generally takes place in about eight hours; during the first five the workmen stir the contents of the pot with a red-hot iron rod, in order to break a kind of crust which forms on the surface. When the glass, adhering to the end of the rod, draws out a thread, and while it appears homogeneous, and free from speiss (arseniuret of nickel), which falls to the bottom, it is ready for pouring, which is accomplished by means of an iron spoon, and the fluid glass is thrown into the vat of water just mentioned. The glass in the vat is removed, and carefully levigated.

Treatment of Ores of Nickel.—This metal possesses many properties in common with cobalt; it is greyish white, and magnetic, like cobalt and iron; it is also very infusible. Its preparation is, at the present day, a matter of very considerable importance, as a very large quantity is annually consumed in the the manufacture of German silver. The following are some of the ores of nickel, with their analyses:—

Kupfernickel—Arseniuret of Nickel—is the most common ore of nickel; it possesses a metallic appearance, and a greyish red colour. When struck with a hammer it evolves a garlic odour; on roasting it gives off a dense arsenical smoke. The first analysis is by Stromeyer; the second that of the Kupfernickel, of Zinkvand, in Hungary; the third the American ore; and the fourth that of Allemont.

Nickel	44·2	30·6	15·6	39·9
Cobalt	—	2·2	4·6	·2
Iron	·6	8·6	16·6	—
Arsenic	54·8	51·0	46·0	48·8
Antimony	—	—	1·4	8·0
Sulphur	·4	4·2	8·6	2·0
Gangue	—	·4	5·8	—
	100·0	97·0	98·6	98·9

Arsenio-Sulphuret of Nickel—Grey Nickel—has a greyish white, shining, metallic appearance; in the closed tube a large quantity of sulphuret of arsenic sublimes. It is often found mixed with arsenical nickel and mispickel. The first analysis by Berzelius, of the grey nickel of Loos, in Nelsingland; the second by Hoffman, of the grey nickel, from Hasselhue, near Tanne, in the Hartz.

Nickel	29·9	30·0
Cobalt	·9	·6
Iron	4·1	3·3
Arsenic	45·4	53·6
Sulphur	19·3	11·0
Gangue	·9	—
	100·5	98·5

Antimonio-Sulphuret of Nickel is very like the above ore—grey nickel. Before the blow-pipe in the open tube an abundant smoke of oxide of antimony is given off. The first analysis is by H. Rose, of the ore found at Landscron, in the Siegen district; the second that of Treusbourg, by Klaproth.

Nickel	28·0	25·3
Arsenic	—	11·7
Antimony	54·5	47·7
Sulphur	15·5	15·3
	98·0	100·0

Composition of speiss obtained in the treatment of the ores of cobalt:—Nickel, 49·0; cobalt, 3·2; copper, 1·6; arsenic, 37·8; sulphur, 7·8; antimony, a trace; adhering sand, ·6 = 100·0.

Metallic Nickel is prepared from the pure oxide, in the same manner as metallic cobalt, by heating it in a pot lined with charcoal; or else the oxide must be mixed with charcoal and some vitreous matter, to act as flux.

Preparation of Oxide of Nickel from Speiss—Tupputi's Method.—Reduce the speiss to powder, and add to it 2½ parts of nitric acid, sp. gr. 1·3, diluted with an equal bulk of water; an action gradually takes place, and, by the aid of a gentle heat, the whole dissolves. All the metals in the solution exist, as sulphates, arseniates, and nitrates; and a considerable portion of the arsenic exists as arsenious acid. The solution is filtered and concentrated to one-fourth of its volume, on which a large quantity of arsenious acid, in distinct crystals, is deposited. These crystals are separated by filtration, and the liquid is again evaporated; and, when yet hot, a solution of carbonate of soda is gradually added to it, taking care to agitate it briskly, in order to favour the evolution of carbonic acid, and render the reaction more uniform; in proportion as the excess of acid is neutralised, the arseniates contained are deposited, in the order of their non-solubilities. The arseniate of peroxide of iron precipitates first; then that of cobalt and copper; and, lastly, that of nickel. The first that forms consists of yellowish-white flocks of arseniate of iron, after which a fine rose-coloured precipitate is obtained, which is arseniate of cobalt, mixed with a little arseniate of copper and manganese. It is easy to separate the whole of the arseniate of iron; but it is not so easy to separate the arseniate of cobalt; because, when the greater part is precipitated, arseniate of nickel also falls. The precipitate becomes pale green, and more or less cobalt is separated, in proportion as the operation is carried on to a greater or less extent. There remains in the liquid, arseniate, nitrate, and sulphate, of nickel, together with a little cobalt. It must now be much diluted with water, and a current of sulphuretted hydrogen gas passed through it. If the liquid be sufficiently acid, this gas throws down neither nickel nor cobalt; but precipitates a sulphuret of arsenic. After some time the liquid becomes cloudy, and lets fall flocks of a fine yellow colour—this is the sulphur compound of arsenic. When the solution, after filtration, smells strongly of sulphuretted hydrogen, the whole of the arsenic is separated. The liquid has now to be again evaporated, in order to expel excess of sulphuretted hydrogen; it is then diluted with water, and excess of solution of carbonate of soda added, which throws down a carbonate of nickel of a pale green colour—this contains only a small quantity of cobalt. If this be well washed with water, dried, and carefully ignited, in an earthern crucible, oxide of nickel will be the product. This operation can be much shortened by adding to the speiss, before dissolving it, some iron filings, as recommended in the preparation of oxide of cobalt.

Berthier's Process.—Reduce the speiss to fine powder, and roast it until no more arsenical vapours are disengaged—taking great care in the management of the fire, so as to prevent the fusion of the roasting matter. Add to the roasted speiss a suitable quantity of metallic iron, which must be in such amount that the whole of the arsenic may be transformed into arseniate of iron. This can be determined by the trial of a small quantity. The whole is then dissolved in boiling aqua regia, and evaporated to dryness; the residue, treated with water, leaves a large quantity of arseniate of iron. The filtered, or decanted liquid yet contains some, which can be separated by cautious addition of carbonate of soda. The reaction is stopped when the deposit assumes a greenish appearance. The liquid is now treated, as before, with sulphuretted hydrogen and carbonate of soda.

[In next week's Journal, the treatment of the ores of nickel will be concluded.]

THE TAVY CONSOLS—CLAIM OF A DISCHARGED CAPTAIN FOR WAGES.—At the Tavistock County Court, an action was brought by Mr. A. W. Martin, late a captain in the Tavy Consols Mine, against Mr. W. Rendle, a shareholder therein, to recover 20*l.*, as salary for four months. Mr. J. Tucker appeared for the plaintiff, and Mr. R. Robins for the defendant. Mr. TUCKER stated the case, and called Mr. P. Fisher, the purser, who was examined at great length, and from the evidence it appeared that the plaintiff, being the captain of the mine, was at Tavistock on the 1st of December last, and there met with an accident, and broke his leg, which rendered him unable to attend to his duties as captain for a considerable time. Another captain was, therefore, appointed *pro tem.*, and soon after his appointment was confirmed, which virtually superseded the plaintiff. The adventurers, however, entertaining a friendly feeling for the plaintiff, agreed to pay him 3*l.* 3s. per month for the three months following the accident—December, January, and February. The plaintiff took no steps towards being reinstated, and no evidence was offered to show that he had made any application for the purpose until about the middle of June, when he attended a meeting of the adventurers, and stated that he was well enough to attend to his duties again, and asked them for a situation, and they decided that his application should not be entertained; and the consequence was, that he brought the present action to recover salary for the months of March, April, May, and June, at the rate of 6*l.* 6s. per month (which was the salary he received before the accident) abandoning the excess beyond 20*l.* in order to bring it within the jurisdiction of the court. It was attempted to be shown, that the adventurers had always considered him as their agent, inasmuch as in the month of March last they agreed to refer a matter in dispute between them and some of their workmen to their captain (the plaintiff); but this was denied by Mr. Fisher.—Witnesses were called on behalf of the plaintiff, to show that the accident happened when he was at Tavistock on business connected with the mine; but both Mr. Fisher and Admiral Tremlett, the latter of whom was called on behalf of the defendant, stated that the plaintiff admitted to them that he was at Tavistock on his own private business, but afterwards said something about his being there about some kibbles.—Mr. ROBINS addressed the jury for the defendant, and Mr. TUCKER was heard in reply; when his HONOUR summed up the case, telling the jury that, according to the law of the land, the plaintiff was a servant to the company by the year, and that he could only be got rid of on reasonable notice, or in consequence of misconduct. He also told the jury that he was not entitled to claim salary unless for services performed, except that his inability to perform such service was clearly occasioned by the company, in which case he would be entitled to compensation, even though no services were performed. His Honour thought also, that the evidence was insufficient to establish that the accident was attributable to the company; and that, therefore, as the plaintiff had not rendered any service, nor offered to do so during the months for which he sought to recover salary, he was not entitled to a verdict in his favour; but he left it for the jury to say, whether they thought the accident might be said to have happened when the plaiatiff was engaged in the business of the company, and if so, to say what compensation he ought to receive.—The jury consulted for some time, and then requested leave to retire. A bailiff was sworn in the usual way to keep them locked up without meat, &c., and after an absence of about an hour, they returned with a verdict for the plaintiff.—*Plymouth Journal.*

ACCIDENTS.

Dreadful Pit Accident at Kingswinford—Eight Men Burnt by an Explosion of Gas.—A melancholy accident from explosion of fire-damp occurred to the colliers employed in a pit belonging to Messrs Jones and Oakes, at the Stand Hill Colliery, near Kingswinford: eight of the poor fellows were so frightfully burnt, that little hopes were at first entertained of their recovery. The names of the unfortunate men are Sergeant, John and Thomas Capewell, Guest, Bullock, Hadyn, Simpson, and another, whose name we could not ascertain. They were attended by Mr. Cochrane, from Dudley, and Messrs. Russell and Chapman, assistants to Mr. T. P. Kempson, of Brierley Hill, with great promptitude, and, under their respective treatment some of them are likely to recover. Sergeant has since died, and we are informed that one, if not two other of the unfortunate sufferers are not expected to survive. It seems that the men were proceeding with others along the gateway of the pit towards the stations at which they usually followed their occupation, and while passing along, bearing a light (whether a safety-lamp or an ordinary lanthorn is not yet ascertained), a quantity of gas that had been generated during the night ignited, and caused the explosion which has been attended with such fatal results. Since the above was in type we have received further particulars of this melancholy occurrence. It appears from the evidence adduced at the inquest, at the Rock Tavern, Brockmoor, that George Simpkins, "doggy," who is represented as being a very careful man, was in the act of trying the pit with the safety lamp when the explosion ensued. The pit was very carefully worked, having two air-heads. Several men employed in the pit gave testimony as to the great care which was exercised in its working. Mr. Oakes, one of the proprietors of the colliery, submitted a map of the workings, for the inspection of the jury, who returned a verdict of "Accidental Death." The two poor lads who have lost their lives are William Sergeant, aged 19, and Joseph Guest, aged 12 years. We are sorry to add that the other sufferers, who are under the careful treatment of Mr. Thomas Cochrane, surgeon, are not expected to recover.—*Birmingham Journal.*

— In the same district, in addition to the foregoing, a man named Edwards, was killed by a quantity of earth falling upon him, at the time he was at work at the Haden-hill Colliery, near Oldbury. He has left a wife and five children.—On Wednesday, two men were killed in consequence of a slip of sand at some pits near to Norton, a short distance from Stourbridge. They were literally entombed alive beneath the sand. One of the men has left a wife and eight children.—On Monday, a man named William Corns, was killed on descending into Mr. Davis's pit, at Groet's-green, near West Bromwich, in which it was known that there was a quantity of foul air. The deceased perished in descending the shaft, although previously warned of the danger. Twice his candle was extinguished in the progress of the descent; he then determined to go down in the dark, and died, it is supposed, from suffocation. Casualties of this kind, it appears, are of daily occurrence in this district, the majority of them arising from carelessness or recklessness. The number of children left orphans by such means is most lamentable.

Tipton.—Thomas Wood was killed by a piece of limestone, which was blown with considerable violence to a distance of 50 or 60 yards, and which struck him on the head, while firing the mine in a pit at Dudley Port, belonging to Mr. Giles.

Most Awful Death.—An inquest was held on Thursday at the Gray Mare, at Gannow-Habergham Eaves, on view of the body of John Boothman, aged 13. The deceased was a drawer in Bartlay-hills coal mine, and on Tuesday evening had ascended the shaft, which is 175 yards deep, in a tub drawn up by the engine. On getting out of it on to the side of the pit, his foot slipped, and he fell down the shaft. In falling, he caught at a stay near the top, but could not retain his hold. A person at the bottom stated that he had heard the deceased falling down the shaft. One leg and thigh came first, then the head, and then the remainder of the body, being severed to pieces, no doubt, by falling against the stays in its descent.—Verdict "Accidental Death."

Miraculous Escape.—On Saturday last, a collier, named Richard Duckett, was dreadfully injured all over his body by the fall of an enormous quantity of coal, in a pit belonging to the Wednesbury Oak Colliery (Mr. Philip Williams's). It was some time before the poor fellow was extricated from beneath the ponderous mass, when he was conveyed to his home at Bloomfield, Tipton, where, on examination, it was found (strange to say), that no bones were broken! He his under the able treatment of Mr. W. E. Johnson, of Dudley, and is, it is said, likely to recover.—*Wolverhampton Chronicle.*

Dudley.—On Monday, as a boy named York was playing in a pit at Bumble Hole Colliery, with some gunpowder for blasting the mine, a quantity became ignited by a lighted candle and exploded, severely burning the imprudent lad about the head and shoulders.

Wednesbury.—J. Glover was killed by a fall of roof in Mr. Walker's colliery—a fellow workman, named Walker, was nearly overwhelmed by the same mass.

Holly Hall Colliery, Dudley.—E. Stephens, who had been at work all Wednesday night, at about half-past five the following morning was going into the works to see what effect a blast of gunpowder (which had been fired about three-quarters of an hour previously, and by which time it was supposed all the coals expected to fall had fallen) had caused, when about 20 tons of the mine fell suddenly upon the unfortunate man, who, when extricated, was found to be quite dead.

Treleigh Consols Mine.—On Thursday last, William Bray was at work at the bottom of a shaft, and on taking off his "hat-cap," a large stone fell out of an ascending kibble, struck the poor fellow on the head, and inflicted a small scalp wound, producing instant death, by rupturing a blood vessel in the brain, or otherwise injuring the spinal marrow just as it passes out of the skull.

THE VOLCANIC FORMATION OF THE CANARY ISLANDS.

This group of islands, seven in number, which lay in about 19° west longitude, between 27° and 29° north latitude, and about 150 miles to the south-west of Morocco, are dependencies of the Crown of Spain, and comparatively unknown to Europeans. As they possess considerable interest, in a geological point of view, the following observations, collated by the celebrated traveller, Mr. Von Buch, we trust will not be unacceptable to our readers:—The most considerable is the island of Teneriffe. A great portion of this island is composed of basalt, the peaks of which incline towards the coast; the felspar rocks are more abundant in the centre, which approach towards the peak, and form a species of transition to the igneous rocks, which appear to constitute the base of the volcano. The basalt is covered by a white tuff, composed principally of pumice-stone, known in the country by the name of *piedra tosca*; its position is remarkable by being covered by the *debris* of the peak. The volcanic cones are situated about the middle of the separation of the lava streams, and are generally only those of which any correct date and account can be given. The circle of the crater of elevation—from the centre of which the peak of Teneriffe elevates itself—is well defined towards the east and south; but, to the west and north, it appears at different periods to have been destroyed by the erruptions of the volcano. The rocks which compose it are in small peaks; in the lower parts, large fragments of tuff are discovered, lying above the other igneous rocks; and the peaks of basalt are concentrated in the upper part. This leads us to imagine that the crater of elevation has opened the igneous rocks, lifted, broken, and separated them from each other, and finally placed the one over the other in great disorder. The declivity of the peak is covered with white pumice-stone, above which are large veins of black obsidian, which seem to have a vertical inclination towards the base of the crater. A quantity of the smaller volcanic cones surround the base of the grand cone, and consist of raphilite, obsidian, and pumice-stone. There are no signs of active eruption in the crater of the peak; and it appears for many ages to have only been a sulphurous mountain. The conic mountain of Chahorra, contiguous to the peak, and situated in the same crater of elevation, contains a much larger crater. These two cones, which it is impossible but to regard as parts of the same volcano, have at different periods formed themselves as large channels in the middle of the circle—so that, in former times, they have constantly established a communication from the interior with the atmosphere. The principal number of the cones of eruption are in the lower parts of the island; the eruptions, most probably, have, however, been at the elevation of the peak. The ground over which the lava has poured, is generally covered by the tuff, called *tosca*. Many parts of the island are remarkable, from the dykes of basalt which traverse it in all directions.

GRAND CANARY.—In many parts of this island, stones are observed with the appearance of lime oolites, which are formed by the remains of shells, igneous rocks, and basalt, united by a calcareous cement. This leads us to believe that the oolites of Jura have, in all probability, been formed in an analagous manner. The soil of this island is purely volcanic. In all the elevated portions, columns of basalt are seen. In the valleys, and towards the coast, the surface of the earth is observed to be intersected in various directions with veins of basalt. The crater, known by the name of the Caldera (kettle) of St. Damaso, is the most remarkable in the island, and one of the handsomest in the globe. There is, likewise, another crater; but less deep than that in the island of Palma. Tradition does not speak of any known eruption on the island of Grand Canary; but there are evident signs of those of an anterior date.

PALMA.—The crater of elevation in the island of Palma, and the Caldera of Palma in this island, afford one of the most interesting and instructive studies of the formation of basaltic isles. This crater, placed in the centre, forms a large cavity, around which the rest are grouped. The island is nearly round, with the exception of a promontory towards the south, and is entirely basaltic. The peaks of basalt are alternated with a red argillaceous earth—resulting from the decomposition of the particles of lava. The veins of basalt traverse these peaks in irregular threads, and appear more numerous in the centre; as they approach the crater, they diminish, recoil, and appear as if they were an extraneous portion of the formation. The dominant rock is in this point diorite, intermingled with crystals of felspar, amphibole, and pyrites; further from it are the white igneous rocks, containing crystals of felspar, chabasie, epidote, carbonate of lime, and common garnets; these veins have evidently traversed rocks of an older formation, the base of which is not far distant. The basalt appears again to show itself at the entrance of the crater—the interior of which is formed of tuff and lava, inclining towards the circle. The deep valley, called Barranco de las Angustias, which stretches from the crater to the beach of the sea, is a phenomenon common to all the craters of elevation. Among the craters—the interior of which can be seen—there is none in which can be discovered any signs of eruption, or streams of lava; those cones which are on the outer side, are at a considerable distance from the great crater, and almost at the foot of the mountains. The eruptions appear to have the same contour as in the larger volcano. In general, the eruptions in the island of Palma, have occurred some distance from the mountains which formed the circle. The only one described—that of Fuen Caliente, 1677—is stated as having been followed by earthquakes. The soil raised itself, and formed eight or ten large craters, which emitted torrents of lava; subsequently, a larger crater elevated itself, and discharged an immense quantity of stones, cinders, and sand; finally, fixed gases were observed in several places to escape from the soil. The lava produced in this eruption was entirely basaltic, containing pyroxene, and a large quantity of peridot; but not the slightest appearance of felspar.

LANZAROTE.—The celebrated eruption of 1730, which destroyed about one-third of the island, rose from about the centre of the basalt, which forms the soil of this locality; a numerous series of conic craters, which occupy a length of about two Spanish leagues, rest above the basalt; their cones, towards the interior of the island, are mostly open. The lava is black, containing crystals of pyroxene and some peridot in small masses, which increase in size as it approaches the head of the crater; these lavas cover an extent of ground of more than three square leagues. The eruption continued from the 1st of September, 1730, to the 16th of April, 1736; towards the end of June, 1731, flames were observed to issue from the sea, on the western coast of Lanzarote. To the northward of the island there has been an eruption, but of this there is no historial account. There are three volanic cones; that of "El Corona" is the most remarkable; but, without doubt, it was formed long antecedent to the event above related.

FUERTEVENTURA.—The island of Fuerteventura, appears to be a continuation of that of Lanzarote. Similar to that island, it is covered with volcanic cones and streams of lava; it is absolutely impossible to assign any epoch at which they were formed.

In using the nomenclature, or applying to every eruption of lava, the term "volcano," without inquiring whether it is a fresh volcano, is simply an abbreviation of the expression, "volcanic eruption." For instance, to style those volcanoes, which destroyed Torre del Greco, in 1794, and buried Catania in 1669, would be incorrect, as it is well known, that both these arise from no other causes than eruptions of Vesuvius and Etna. The same argument is applicable to the island of Teneriffe. The charts which indicate the volcanoes of Guimar and Carachico, and those of Chio and Santiago, only point to these as partial eruptions of the peak. That of Teneriffe is only similar to all other principal volcanoes, being a central point, around which the principal eruptions form themselves—demonstrating, in this manner, the relative positions and principal relations between the exterior and interior volcanic causes. It is less probable that there exists the same relation between the principal volcano and eruptions in islands at a distance; and it would be somewhat bold to conjecture, that the eruptions of the islands of Palma and Lanzarote derived their origin from the peak; but it almost carries conviction that they are so, when we consider they have the same characteristics as those which take place at the foot of the principal volcano. It has never been observed there, nor in the islands further distant from Teneriffe, that different eruptions have issued from the same aperture; nor has it been perceived that in the same island continuous eruptions have followed. On the contrary, it is believed, that an eruption once terminated, promises the devasted island a durable repose; for it has been observed, the eruptions nearest to those epochs have generally shown themselves in points diametrically opposite, as regards the principal volcano—the Peak of Teneriffe—that which tends to prove that the sole cause of this and similar phenomena, is, if we may use the term, the oscillation in its circles, and at considerable distances. This is further demonstrated by the unfrequency of eruptions in the Canary Islands, which, however, merit a more detailed examination than it was possible to afford.

The almost innumerable streams of lava between Jeod and Adena, the irregular streams of Isleta, in the Island of Canary, the small streams of Vandama, those of Oliva, in the northern part of Fuerteventura, possess in such a manner the characteristics of modern streams, that there is not a doubt but the epochs of their descent could be traced were the history of the islands three centuries older than the discovery. The eruption of the 15th April, 1585, in the Canton of Lavanda, in the Island of Palma, is the first of which we have any data; the stream rushed down towards the sea, after having run a space of two leagues. The second eruption known took place in the same island, on the 17th November, 1677, and destroyed the mineral baths of Fuen Caliente. To these followed those in the Island of Teneriffe, on the 31st December, 1704, and the 5th of January, 1705, in the vicinity of Guimar, and that of the 5th May, 1706, which opened itself on the heights of the city of Garachio, in an opposite direction from the peak. About a third part of the Island of Lanzarote was destroyed by an eruption, which continued, with slight intervals, from the 1st September, 1730, to 1736. On the 9th of June, 1798, a stream of lava descended from the base of the mountain of Chahorra, on the south-east side, and at an elevation of more than 6000 feet.

Few eruptions in the Island of Teneriffe can be said to have taken place at such a height, and in the other islands they have been considerably lower. The most elevated of those has been that of Lavanda, in the Island of Palma, which occurred at about 2600 ft. above the level of the sea. The eruption of the month of November, 1824, took place about a league to the north of the port of Naos, in the Island of Lanzarote, not far from the Cape of the Anconas.

Although the small number of eruptions that have taken place might designate the Peak of Teide as the central point of these phenomena, it would be visionary to regard these different islands as formerly joined, but since separated, and torn asunder by the force of the volvanic convulsions. Each island is of itself a separate body, which contains in its centre a crater of elevation of a considerable circumference, round the exterior of which the basaltic rocks raise themselves iu all forms. This is unmistakeably observed in the Island of Grand Canary, where the exterior circumference indicates the direction and contour of the crater, which it contains in the centre; and its circular form proves incontestably at first sight, that this is no disjointed mass, as all its parts radiate round a centre, from whence the force proceeded, which elevated it from the bottom of the sea. This fact, and the inferences that may be deduced from it, are equally clear, and not less evident in the Island of Palma, as there the land is, at times, more or less elevated; the similarity of the declination is most remarkable between the exterior circumference of the island and the sides of the crater. The craters of elevation are less defined in Fuerteventura and Lanzarote; these two islands owe their origin and lengthened extension, to eruptions in the form of veins; nevertheless, they contain craters, in Lanzarote, near the steep coast, and almost vertical with the Straits of Rio, in front of the Island of Gracioso, in Fuerteventura, in the conical basin, in the centre of which is the capital Santa Maria de Betancuria.

According to these theories, the Canary Islands must be considered as a group of isles, elevated from the bottom of the sea at various periods. The force capable of producing an effect so considerable, finds it necessary to concentrate and increase itself in its interior, before it attempts to conquer the resistance which oppresses it—detached from the bottom of the sea, from a great depth in the interior of the globe, formed of basalt and conglomerates, impelled with violence to lift itself above the surface, it finishes by forming the crater of elevation. Such an enormous mass, raising itself slowly, cannot recover the aperture, produced by the development of such force, without a volcano occurring; on the contrary, the peak elevates itself a great cupola in the centre of the crater of elevation; she maintains from her interior a communication with the atmosphere, and is constantly emitting vapours; if there was any obstacle to the discharge of the lava, it would issue forth at the foot of the volcano, or at some distance from it, without its being necessary to raise entire islands. The central point of these phenomena is always a volcano; at times this has been obstructed, at certain heights, by the cooling and falling of the melted masses; but this has never occurred at any depth. There exists, probably, but one central volcano in the Canary Islands, which is that of the Peak of Teide.

SULPHURIC ACID.—M. Jobard, the director of the Museum of Industry, at Brussels, has announced the arrival in London of Mr. Schneider, a distinguished manufacturing chemist, the author of an invention of the highest importance, and calculated to promote the advancement of science. By this new process, we are informed, the sulphuric acid is produced without applying any nitric acid or nitrates, and without employing any of those enormous lead rooms hitherto in use. This valuable discovery has been highly approved and honourably praised by MM. Dumas, Payer, Pelouse, de Bussy, Chevalier, &c., in France, and by MM. Chandellon, Nollet, Guillery, in Belgium. We hope to give some particulars of this invention in an early Number.

SALT.—We are informed, that a spring of brine has just been "tapped," by Mr. B. Smith, at Droitwich, Cheshire, at the depth of 217 ft.—being a greater depth than any before discovered; the usual depth being 170 or 180 feet.

DISCOVERY OF COAL AT PARKGATE.—Some few months back a very valuable discovery of coal was made on the property of the Hon. Mr. Mostyn, in this ocality, and rich veins were ascertained to exist, but there was some doubt as Ito the extent of them. With the view of ascertaining this fact, further operations were carried on, which have just been completed, and the result proves that the field of coal is of vast extent and richness. Considering the proximity of Liverpool and Birkenhead, and that the coal is on the Cheshire side of the River Dee, this discovery must prove of great public advantage, as well as profit to the honourable owner.

ON THE OCCURRENCE OF VANADIUM IN THE REFINERY SLAG OF STAFFORDSHIRE.—Mr. Isaiah Deck, in a letter to the *Chemical Gazette*, says—"Being commissioned by an eminent English railway engineer, who has directed much attention towards the qualities of iron employed in bridges, &c., to examine some refinery slag, which, without any assignable reason, had the property of imparting extraordinary ductility to the iron with which it was mixed, I have succeeded in discovering a large quantity of vanadium, existing as silicate of vanadic acid, combined with small portions of molybdena, chrome, and the usual quantities of phosphoric acid and silicates. The first metal being confined to few localities, has had its properties but little studied by English chemists, and has hitherto been found in no other slag than that from the Taberg Mine in Sweden, the iron of which is remarkable for its ductility; and no mention is made of it in Dr. Percy's elaborate analyses of slags for the British Association. The quantity of slag at my command operated upon was very small; but the vanadium existed in a much larger proportion than in the Swedish slag, which I have since examined; and it is, doubtless, the cause of the superior ductility of both. In a short time I shall be enabled to lay before your readers the results of examination of a large quantity of the slag, as at present the analysis is the private property of the party employing me. The *entire* merit of the discovery does not rest with myself; and I am happy in this notice to bear testimony to the suggestions and superintendence of Prof. Wöhler, in whose well-appointed laboratory the analysis was performed."

RAILWAY SPEED.—The limitation of railway speed, then, is not to be found in the width of gauge, but in other and different considerations, such as the strains to which it is prudent to submit materials—the same on every gauge—the local features of the railway (as its gradients, curves, &c.), the comparative freedom or otherwise of the line from trains (such as goods and mineral trains), necessarily travelling at low speeds. Thus, on the London and South-Western, a narrow gauge railway, the express trains have, during the last 12 months, been travelling *at a higher rate of speed* (by 1½ mile per hour) than those of the Great Western Railway from London to Exeter on the broad gauge.—From *Messrs. Robert Stephenson and Locke's Report.*

CORNISH STEAM-ENGINES.

The number of pumping-engines reported for the month of June is 27—the quantity of coals consumed being 2544 tons, lifting, in the aggregate, 24,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 54,000,000 lbs. lifted 1 foot high by the consumption of a bushel of coal.—The following have exceeded the average:—

Mines.	Engines.	Length of stroke	Load in pounds.	Load per sq. inch. on plst.	Strokes per min.	Consump. of coal in bus.	Million lbs. lifted 1 foot by consump. of 1 bush. coal	Average quantity of water per min.
Great Work ..	Leeds's 60-in.	9·0	47,020	12·9	9·2	2668	57·2	218
East W. Crofty	Trevenson's 80	10·3	85,520	12·7	3·8	2008	65·0	215
Carn Brea ..	Sims's 50&90 inch comb.	9·0	57,392	22·8	5·0	1722	58·7	250
Andw.&Nang.	—— 70-inch.	10·0	51,492	10·7	3·4	1234	58·7	207
United Mines	Taylor's 85-in.	11·0	97,108	15·5	6·0	3505	85·3	
Ditto	Cardoza's 90-in.	9·0	99,468	13·7	6·6	4532	57·8	1832
Ditto	Eldon's 30-inch	9·0	13,631	16·0	8·1	626	66·7	
Ditto	Loam's 85-inch	10·0	89,320	11·8	7·7	4768	54·9	
Ditto	Hocking's 85-in	10·0	99,093	14·6	7·1	5134	58·2	
Per. St.Geo.	Sims' 60 &100 inch comb.	9·0	90,279	28·2	7·2	4194	63·3	1267
East Wh. Rose	Penrose's 70in.	10·0	58,288	13·6	4·3	1746	65·7	586
Ditto	Michell's 70 in.	10·0	62,699	14·6	3·8	1766	62·9	
Wh.Mary Con.	—— 63-inch	8·66	27,508	8·8	5·6	1280	56·1	236

Mining Correspondence.

ENGLISH MINES.

ASHBURTON UNITED.—Capt. J. Kernick (Aug. 7) reports—The ground in the 25 fm. level cross-cut, continues favourable for driving; the price is reduced 20s. per fm., and the end getting wet being very likely near the branches of the copper lode. There is no further alteration in the copper pitches. The tin pitches generally are being worked with spirit, and the tributers getting fair wages. We are dressing our tin against the next setting, and shall continue to do so monthly.

BARRISTOWN.—Capt. T. Angove (August 4) reports—The lode in the 16 fm. level end east is rather improved in its regularity, is about 2 ft. wide, composed of carbonate of iron, stones of lead, and blende; the adit end, east of the lode, is at present producing but a small quantity of ore—the lode is large, principally gossan; in the winze, sinking under the adit level, the lode is about 1 ft. wide, producing about 5 cwts. of lead per fm. We are cutting a plot at the 16 fm. level, in the flat-rod shaft, before we commence sinking the floor of the ground at the 16 fm. level—intersecting the lode has not materially changed it. The pitches are looking much the same as last reported.

BEDFORD UNITED.—Capt. J. Phillips (August 9) reports.—At Wheal Marquis, the engine-shaft is 4 fms. 1 ft. under the 90 fm. level. The 90 fm. level west is holed to the 90 fm. level cross-cut south, and we are now engaged laying down tram-road; the lode in the 90 fm. level east is 3 ft. wide, and worth 16*l.* per fm.; the back of this level, east of Hodge's rise, has been set at a tribute of 3s. 9d. in 1*l.*; the stopes in the back of this level, east of the sump-winze, are suspended for the time; the back of this level, west of the sump-winze, has been set on tribute at 2s. in 1*l.* In the 80 fm. level east, the lode is 2 ft. wide, producing saving work. Evans's winze is holed to the 80, and th western end set on tribute at 8s. in 1*l.*

Aug. 8.—The usual monthly survey of these mines has been made to-day, and d all the labour cost for time paid. The shaft has been sunk 2 fms. 4 ft. during the past month; the ground has been favourable; the cross-course is, however, now in it, but we hope this will not materially impede our progress. The 90 fm. level is holed. The levelling is proved to be perfectly correct. The cross-cut (from the shaft) measured 4 fms. 1 ft., and the driving west (to meet it) 4 fm. 4 in. The eastern end, in the 90 fm. level, has been extended 1 fm. 5 ft. on the south side of the lode, and the lode cut into for about 3 ft.; it will yield 3 tons of good ore per fm., and is likely to improve. The setting for this month is 2 fms., at 10*l.* per fm., without obligation to cut through the lode. The 80 fm. level east has been extended 5 fms. 2 ft., and holed to Evans's winze; good tribute ground has been opened, part of which has been set at 8s. in 1*l.* The setting for the present month is 3 fms., at 5*l.* 10s., and by four men, instead of six. These ends, with the shaft, comprise the whole of the tutwork bargains. The pitches set are as follows:—In the back of the 90 west, to 4 men, at 2s. in 1*l.*; in the back of the 90 east, to 6 men, at 3s. 9d.; in the back of the 80 east, to 6 men, at 8s.; in the back of the 80 east, to 4 men, 7s. 6d.; in the back of the 70 east, to 2 men, 13s. 4d.; in the back of the 70 east, to 2 men, at 13s. 4d.; in the back of the 70 east, to 2 men, at 13s. 4d.; in the back of the 58 east, to 2 men, at 13s. 4d.; in the back of the 58 west, to 2 men, at 13s. 4d. in 1*l.* The 90 fm. level having been holed to the shaft, the men recently engaged in the cross-cut and western end in this level, will be employed in removing the tramroad from the 70 to the 90 fm. level, and in fixing the plunger-lift in the same level, with other necessary work, to put the shaft in complete order; this will occupy them nearly a month—afterwards they will not be required. The mine is improved considerably, and from the quantity of ore ground laid open during the past month, we may fairly calculate on continuing our present samplings for many months, without touching any of the valuable ore ground below the 90 fm. level.—J. WALFUSTON.

CARADON UNITED.—The agent (August 8) reports—We have driven through Morshead's lode, in the 38 fm. level; and find the main part of it is about 7 ft. wide, with several branches contiguous to it; including the whole, it is from 12 to 14 ft. wide; the lode is composed of gossan, soft spar, prian, flookan, portions of decomposed iron, and copper ore, &c.; in this place it is still connected with pot, or soft granite; and I have reasons to believe we are near the cross-course, as there is a large stream of water proceeding from the lode. I think it proper to continue the cross-cut south, and cut the tin lode, which I judge to be about 3½ fathoms to the head of us, where we can drive back in better ground, in search of the cross-course, which will give time for the water to drain itself, and, consequently, will save much timber; the ground in the south can be driven for about 5*l.* per fm. The little copper lode, in the 28 fm. level, is just the same as when I last reported; there are still good portions of ore, and I have still reasons to believe these lodes will be productive in depth. As to our agreement for levels, it is for no longer than needed.

COOMBE VALLEY.—Mr. C. S. Richardson (August 8) reports—We are working on a fine vein of blue slate at the island, which fully keeps going all our cleavers and dressers. The six Welshmen we have from Carnarvon are much superior to any of our Cornish quarrymen; they save more slate, and make it much better. We are making all sizes, under duchesses. At Allshard Quarry we are opening more ground, over a fine run of slate, on the north side. Great returns will shortly be made from this quarry. We are sadly in want of more men and machinery.

CWM ERFIN.—Capt. S. Nicholls (July 29) reports—The engine-shaft is down 6 fms. The lode is not in the shaft as yet, but there are some strings o ore in the country, so I think the lode is near. In the 10 fm. level east there are some spots of ore in the lode, rather improving from last week's report. The stope, east of whim-shaft, is worth 6 cwts. of ore per fm. The stope, 20 fms east of whim-shaft, is worth 6 cwts. of ore per fm. The stope, west of the eastern shaft, is worth 5 cwts. of ore per fm.——Aug. 5.—The engine-shaft is down 7 fms., and the lode is still to the south of the shaft. We are not likely to meet with the lode until the shaft is down, and then we shall have a short distance to drive to meet the lode. The 20 fm. level, west of the whim-shaft, is just as last reported. The 10 fm. level, east of the eastern shaft, is looking more promising for ore than it has been for many fathoms. The stope, east of the whim-shaft, is worth 6 cwts. of ore per fm. The stope, 20 fms. east of the whim-shaft, is worth 6 cwts. of ore per fm. In the stope, west of the eastern shaft, there has not been anything done this last week.

DEVON AND COURTENAY.—Capt. N. Seccombe (August 8) reports—In our end driving west in the 40 fm. level, on the gossan lode, the lode is 2½ ft. wide, composed of killas, mixed with a great quantity of mundic; the ground continues to get more favourable for driving; there also appears to be a great change in the strata as we progress towards the great gossan pits in the wood. In our end, driving north on the slide in the same level, we have intersected a lode 2½ ft. wide, composed of small branches of spar, mundic, and ore, mixed with killas. I have put the men to drive east on a lode previously intersected, 3 ft. wide, composed of mundic, peach, and spots of ore. Our 50 fm. level continues just the same as last reported. The pitch in the bottom of the 40 fm. level is also without much alteration.

DEAN PRIOR AND BUCKFASTLEIGH.—Capt. J. Carpenter (Aug. 2) reports—I have not anything very particular to inform you, relative to the lode in either of the levels, since the general meeting, held on the 1st of May last, as our operations have been confined to the sinking of the engine-shaft under the 30 fm. level, as then agreed on. However, the few fathoms of the lode which have been developed, west of engine-shaft, continued nearly of the same character as then described—the north part being from 3 to 4 ft. wide, producing a great quantity of mundic, and some very good specimens of copper ore; in fact, what is generally called saving work, or stuff that will pay for cleaning the division, or what is commonly called a horse of killas, between the north and south part of the lode, is small going west—therefore, it is probable it will concentrate when proceeded with in extension, or depth; not having cut the south wall at this point, its exact size is not ascertained; however, I think it is large, although poor; but, from the appearance of the same part of the lode opened on in a winze under the 30, some 5 fms. east, or opposite the cross-cut, there appears to be a decided improvement; the lode at this point (2 fms. under the level) is 4 ft. wide, and a borer-hole has been put in, from 3 to 4 ft. deep; we have not yet discovered the south wall; the 30 fm. level has been driven east of the winze 6 fms.; the lode in the present end is rather confused, or divided by more killas than referred to going west, as has been in the upper levels—therefore, I am of opinion still, the lode will show a much stronger and better appearance in the 40 than it does in the 30. As Mr. John Paull was appointed to survey the mine with me to-day, I must refer you more particularly to a report, I presume, he will present to Mr. Robins, for further details of the properties of the lode, than I have described in the preceding part of this cursory report. I can only add, that the shaft is now 9 fms. under the 30 fm. level, and expect, in a fortnight, it will be sunk to the 40, with all the necessary arrangements, to commence driving to the lode. It will then occupy nearly two months to intersect the lode in the 40 fm. level—a corresponding time to what I stated on the 1st of May—six months to effect the object—in fixing the pitwork, sinking from the 30 to the 40, driving the cross-cut to cut the lode in the 40, whereby we may judge what steps it would be necessary to pursue to carry, or not, the operations of the mine out on a more extensive scale. —The following supplemental report, under date 8th inst., has been received, in reply to a letter addressed him by Mr. H. English, which, as being more in detail, possesses increased interest:—I can only add, my confidence in the mine is unabated; and I am very anxious to see the lode in the 40, more especially from the size and character of the lode in the winze under the 30, which, in my opinion, is a very important improvement there to what has been seen in any other part of the mine. Since I have had the management, in fact, it is such stimulus to me as not to lose one moment's time in pressing towards the object we have in view, of cutting the lode in the 40. I gave strict injunctions when at the mine, the morning prior to my interview with you, that the sinking of the shaft should be completed with all possible dispatch, and the cross-cut commenced in the ordinary way, without cutting a plat to cause a delay, as that work can be set on, at one and the same time, by extra hands, if needful. I also directed the men that were employed in sinking the winze to drive west on the lode in the 30, as I am aware, from the arguments adduced, and the reasons I assigned to you, on your strict investigation when we met, that prudence and economy in doing the work is the great desideratum to bring the undertaking to one of profitable results. I cannot, for a moment, see much benefit can be derived by extending the scale of operations more than I have noticed, till the lode is cut in the 40; then every means I can devise to press

the matter at issue, to make it a concern of profit and magnitude, shall have my best consideration and attention, never doubting, from the great improvement from the 20 to the 30, but that the 40 will be something good to stimulate us on to greater exertions, as there is to be observed in the general character of the lode in the 30 so great an improvement in its composition that nothing but experience and practice could conceive, and it would fail my pen to describe.——Capt. H. Choake (Aug. 2) reports—We have cut into the lode in the winze under the 30, or bottom level, 4 ft. 10 in., and have also bored a hole, 3 ft. 6 in.; but have not discovered the south wall; the change in the lode is of a very encouraging nature, composed of large masses of mundic, copper, spar, and some yellow ore; this shows the strength of the lode in going down. The engine-shaft is sunk below the 30 fm. level about 9 fms.; the strata at that depth holds out the most favourable indications—the shaft being nearly 9 fms. to the north of the lode. A decided change has taken place, both as regards the lode and strata; and it is reasonable to expect the most favourable results in the deeper levels; and the intended 40 fm. level will, at all events, be a criterion in coming under such a large lode—being so much deeper, and composed of such excellent qualities; therefore, we shall make all the progress we can to sink the engine-shaft to the intended depth, and to cross-cut to the lode, being so desirable an object.——Capt. H. Choake (August 9) reports—In cutting into the north part of the lode, near the west end, in the 30 fm. level, I find the lode to be composed of capel, and spangled with ore; being large, we have not as yet discovered the foot-wall. At the engine-shaft, the ground is of just the same nature as reported before. The water is much quicker. The depth of shaft, below the 30 fm. level, is 9 fms. 4 ft. 6 in.

EAST CROWNDALE.—Captain S. Paull (August 5) reports—The lode in Diamond's engine-shaft, at Rix Hill, as when last reported upon, is about 4 ft. wide, composed of peach, capel, spar, mundic, prian, and good stones of tin; altogether the character of the lode is very favourable. The adit level, driving west on the course of the south lode, still continues to look well; the lode is about 5 ft. wide, composed of peach, prian, mundic, and tin, and at present worth 45*l.* per fm.; and, from the general appearance of the lode, without the least doubt, this will be a lasting course of tin; the stopes, in the back of this level, have improved in the past week; the lode is 8 ft. wide, composed of killas in the middle, and a leader north and south, composed of capel, spar, peach, mundic, and tin, and at present worth 20*l.* per fm. We have been driving south-west in a flookan, by two men, in the past week, but the appearances are not favourable to a discovery; we intend to put these men to drive west on the course of the north lode, where there is a very kindly lode, and which was only suspended till the engine and stamps were set to work.

GREAT MICHELL CONSOLS.—Capt. T. Richards (August 9) reports—The lode in the 45, east of the sump-winze, is composed of mundic, spar, fluor, and capel, with a small proportion of copper ore—this level west is at present suspended. In the 35, west of the sump winze, the lode has a promising appearance, containing mundic, peach, and spar, with ore intermixed throughout—the ground is favourable for driving; in this level, east of the engine-shaft, the lode for the whole width of the end contains capel, spar, and mundic, with stones of ore in places.

GWINEAR CONSOLS.—Capt. Hugh Stephens (August 5) reports—The engine-shaft is a little harder than last reported. The 20 fm. end east is still promising, and ground favourable for driving, with more water than usual, so as to nearly drain the 10 fm. level, which shows the ground being hollow before it, and will enable us to sink in the level above to prove the ground. We have just cut the lode west of the slide, in the 20 fm. end west; but, not having got clear of it yet, I cannot say much of it. By the end of next week we shall get the lode quite clear of the slide, at which time I hope to inform you of something better. The 10 fm. end east is kindly, composed of jack, mundic, and peach, with occasional stones of ore.

HOLMBUSH.—Captain William Lean (August 8) reports—The plot in the 132 is completed, and the diagonal shaft set to sink below that level at 18*l.* per fm.; the lode in the 132 fm. level west is still divided into several small branches, composed of spar, mundic, and spots of copper ore. The lode in the 120 fm. level south is 4 ft. wide, composed of quartz, and will produce about 5 cwts. of lead per fm.; the lode in the stopes, in the back of this level, is 4½ ft. wide, producing from 3 to 4 cwts. of lead per fathom. The lode in the 110 fm. level south is 3½ ft. wide, composed of quartz and stones of lead—saving work; the lode in the stopes, in the back of this level, is 4 ft. wide, composed of quartz and lead, and is set on tribute at 11s. in 1*l.* The lode in the 100 fm. level south is 2½ ft. wide, composed of spar, and at times large stones of lead—ground favourable, set at 45s. per fm.; the Flap-jack lode, in the same level east, is 2 ft. wide, composed of copper ore, mundic, spar, and blende, and is set at 3*l.* 10s. per fm.; between 7 and 8 fathoms of ground was driven through on this lode last month; and we shall hasten it on as quick as possible to the east of the great cross-course. The 90 fathom level south is for the present suspended.

KIRKCUDBRIGHTSHIRE.—The agent (Aug. 5) reports—In the 50 fm. level, west of Stewart's shaft, we have cut the caunter this week in this end, or rather it has here fallen in with the lode going west; it has brought good ground with it, and the lode is much improved in appearance and size, with a good stone of lead coming in the middle of the end. The lode in the 40 end, west of Keith's, is much the same, only softer than last week. Keith's shaft is down 9 ft., and the men will now cut a tip-platt, before sinking further. The lode in the 30 end west is large, with a fine branch of ore in the bottom, yielding ½ ton per fm.; the lode in the winze, in the bottom of this level, has greatly improved, and is now yielding above ½ ton per fm. The lode in the 30 end, east of Stewart's, has been producing ½ ton per fm. also this week, and looking still more kindly as it goes to hill.

LEWIS.—Capt. S. S. Noell (August 5) reports—In the ground east the lode is 18 in. wide, at present unproductive. The lode in the 70, west of our sump-shaft, on south branch, is 6 in. wide, worth 5*l.* per fm.; the ground in the 70 south is more favourable than heretofore. In the 60 east the lode is 3½ feet wide, producing some tin, and very promising; the lode in the 60 east, on south branch, is 2 ft. wide, worth 5*l.* per fm.; in the same level west, on south branch, the lode is 3 ft. wide, worth 30*l.* per fm.; we have set a winze to sink below this level, at 2s. tribute, which is producing very good quality tinstuff, and hope to get it down against the cross-cut is in at the 70. The lode in the 50 west, on south branch, is 8 in. wide, yielding some good work for tin. The lode in the 40 east is 6 in. wide, worth 3*l.* per fm. All other places are much the same as when last reported.

LLWYNMALEES MINE.—Capt. Henry Francis (August 5) reports—The 14 fm. level west is driving in a pretty good lode, containing a branch of ore, 6 in. wide, with nice spar and copper, intermixed with black-jack, about 10 in. wide; this level is now 6 ft. west from London shaft. We have finished the plat in the 14 fm. level at the London shaft, and are now prepared to sink under this level. The stopes over the 14 fm. level east, and under the 8 fm. level east, are looking well, the stuff broken from them will average about 14 cwts. of lead per fm, The 14 fm. level west has not looked so well for some time. The stopes in the bottom of the 14 fm. level west are now nearly up to the London shaft, with capital ore in them, averaging about 1 ton per fm., which will be made available when the London shaft is deeper. The 8 fm. level has cut another promising shoot of lead ore to the west; the ground has been disordered, but, from recent appearances, it is resuming strength, and will get into a good course of ore in 5 or 6 fms. driving. I think we can dress 12 tons of ore for the next month. The ore we sold yesterday weighed 17 tons 17 cwts., but, with reductions, it amounts to 16 tons 8 cwts.

MENDIP HILLS.—Capt. F. C. Harpur (Aug. 7) reports—The lode in the 38 fm. level, south of shaft, is at present divided in two parts, the main branch being about 1 ft. 10 in. wide, composed of light coloured flookan, soft spar, iron, and small sprigs of lead near the foot wall; the ground continues rather hard for driving. In the slag department, I am glad to inform you, our operations during the past week have been favourable; we have several tons of slags prepared for the furnaces, and hope, if nothing interrupts us, to get a sufficient quantity, by the latter part of the present week, to keep us smelting some days.

SOUTH WHEAL MARIA.—Capt. G. Francis (August 10) reports—The ground in the south cross-cut continues much the same, and driving about 6 ft. per week. Should the lode continue its underlay to the 20 fm. level, as it does at the surface, we shall intersect the south lode some time in the present month.

SOUTH WHEAL TRELAWNY.—Capt. W. Jenkin (August 7) reports—We are still driving the cross-cut, west of Snell's engine-shaft, in the 30 fm. level, with eight men. We have met with a hard floor of elvan; they tell us they met the same strata in the adjoining mines, just before they cut the lode.

TRELEIGH CONSOLS.—Capt. W. Symons (Aug. 5) reports—Garden's shaft, below the 100, is sinking in the country. The 90, east of ditto, cross-cut south to a branch which has been worked on above. In the 90, west of Garden's, the lode is 20 in. wide, with a small quantity of ore. In the 70, west of ditto, the lode is 10 in. wide, but very little ore. In the 60, west of ditto, the lode is 10 in. wide, with stones of ore only. In the 50, west of ditto, the lode is 3 ft. wide, impregnated with ore, not to value. Wheal Parent engine-shaft, below the adit, is sinking in the country; the adit cross-cut, north of ditto, to cut Wheal Orphan lode.

WEST WHEAL JEWEL.—Capts. Johns and Bray (August 7) report—In the 70 fm. level, west of Wllams's cross-course, on Wheal Jewel lode, the lode is 3 ft. wide, with a very promising appearance, worth 8*l.* per fm.—drove last month, 1 fm. 3 ft. In the 57 fm. level, west of Williams's cross-course, on the same lode, the lode is 4 feet wide; this lode is improving in size and quality, worth 12*l.* per fm.; in the 57 fm. level east, on the same lode, the lode is 9 in. wide, not looking so well as when last taken down, producing stones of ore—drove last month, 1 fm. 4 ft. In the cross-cut, in the 47 fm. level, we have cut the lode the western side of the cross-course, but cannot say much about the size or value until next report—drove south in cross-cut, 2 fms.; rose in the rise, 3 fms. 4 ft. In the deep adit, west of Hodges's cross-course, on the same lode, the lode is 6 in. wide, producing stones of ore—drove, 1 fm. 4 ft. 6 in. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 18 in. wide, unproductive—drove, 2 fms. 0 ft. 6 in. The 12 fm. level, west of Quarry shaft, on the same lode, is suspended—drove, 1 fm. 4 ft. 6 in.; these men are put in the rise that we have set in the back of the 57 fathom level, on Wheal Jewel lode. In the deep adit, west of Quarry shaft, on the same lode, the lode is 1 ft. wide, producing stones of tin—drove 1 fm. 3 ft. 6 in. The stopes that are working in the back of the 12 fm. level, east of Pryor's winze, on tribute, are worth 35*l.* per fm.; the stopes that are working west of Pryor's winze, in the back of this level, are worth 36*l.* per fm.; the stopes working in the bottom of this level, on tribute, are worth 25*l.* per fm. Upon the whole, we think that our prospects are looking much better than they have for the last two years.

WHEAL ANDERTON.—Capt. Carpenter (Aug. 8) reports—We have sold 13 tons 2 cwts. of tin, which has brought the following prices:—2 tons, 40*l.* per ton; 2 tons, 36*l.* 17s. 6d.; 3 tons 3 cwts., 35*l.* 5s.; 1 ton 15 cwts., 32*l.* 10s., 2 tons, 31*l.* 15s.; 2 tons 4 cwts., 20*l.* 5s. The returns for the past quarter exceed those of the one preceding by 300*l.* We are altogether looking well, with good promise for the future.

WHEAL MARY ANN.—Capt. Peter Clymo, jun. (July 31), reports—The lode in the 40 fm. level, south of Barratt's, is 2½ ft. wide, and worth 14*l.* per fm.; the stopes in the back of this level are looking well. The lode in the 30 fm. level, south of the shaft, is split in two parts, with a 5-ft. horse between; the eastern part is 2 ft. wide, composed of gossan, can, and lead; we are driving on the western part, as, from its direction, we think it the main part, which is 1½ ft. wide, and worth 4*l.* per fm.; and we calculate, in about 2 or 3 fms. more driving, the both parts will again unite; the stopes in the back of this level are much as last reported. Pollard's shaft is sunk 11 fms. under the 30, and we have 3 ft. more to sink to get to the level of our 40, south of Barratt's.

WHEAL SARAH.—Capt. J. Spargo (August 9) reports—We have resumed sinking Mayhew's shaft, in which the ground is favourable. The ground in the lobby is much softer for driving; we have been giving 1*l.* per fm. since we have been driving west, but our next setting will be for a less price. The western shaft, on the new lode, is sunk about 6 fms. from the surface; the clay-slate is of a blue nature, and much softer for sinking in the last 6 ft.; and we hope to intersect the lode, by the shaft, in the latter part of another week. The smiths' shop, count-house, &c., are nearly completed, and our surface work—such as raising stones, bringing up deads for the whim round, &c.—is completed. The men stoping in the 9 fm. level are breaking some excellent work for lead. We shall commence making floors for dressing next week.

WHEAL SOPHIA.—Capt. H. Luke (August 4) reports—We have put in penthouse, plat, sollar, hung tackle, and sunk the shaft 4 fms. under the adit—the ground much the same as when reported on by Capt. Carpenter; and, should there be no favourable change of ground, although, from the present appearance, we may naturally expect it, we shall be able to sink the proposed depth in about the time calculated. We have sunk through a branch of spar and solid stones of yellow ore, which no doubt will improve the lode when they come in contact.

WHEAL TRELAWNY.—Captain J. Bryant (Aug. 8) reports—The ground in Phillips's shaft, sinking under the 62 fm. level, is much as last reported. The lode in the 62 fm. level north is 3 ft. wide, composed of spar, can, and lead, and worth 18*l.* per fm.; in this level south the lode is still improving, and now worth 6*l.* per fm.; the stopes, in the back of this level, are yielding about 15 cwts. of lead per fm. The lode in the 52 north is 2 ft. wide, and worth 8*l.* per fm.; the stopes, in the back of this level, are producing a moderate quantity of ore. The driving of the 42 north is discontinued, on account of the ores, attle, &c., now in the level, and which will be drained in the course of a few days, after which it will be resumed; we are now in the back of this level, to communicate to the 32, where the lode is worth 9*l.* per fm.; the stopes, in the back of this level are very similar to my last report. The lode in the winze, sinking under the 32, is worth 8*l.* per fm. The ground in Trelawny's shaft continues favourable for sinking. The ground in the 52 and 22 fm. level cross-cuts is similar to my last report. At the north mine, the lode in the 30, north of Smith's shaft, is about 1 ft. wide, and producing some good stones of lead; in the winze, south of the shaft, the lode is 2½ ft. wide, and worth 7*l.* per fm.

WHEAL TRESCOLL.—Capt. John Webb (August 5) reports—We started our engine on Saturday last; she works beautifully steady, and every thing seems to go well: she forked the water, which was 3½ fms. in the shaft under adit, in 50 minutes. The quantity of coals, including what was used for drying the flues, was 4 cwts. Our operations for the next month will be chiefly confined to sinking the engine-shaft. We have enough tin-stuff at grass to keep our stamps going for three months.

WHEAL VINCENT.—Capt. J. Spargo (August 9) reports—We have an extraordinary change in driving the deep adit on the north lode; we have cut through a small vein that crosses the lode, nearly at a right angle, which altogether changes the nature of the lode; instead of tin work, it is composed of large stones of mundic, with spots of black and yellow copper; the lode is 2 ft. wide, underlaying about 2½ ft. in a fm., with a small flookan on the foot wall of the lode, and running about 10° south of west. In finding a large cross-course—back about 25 fms. from the present end—we discovered, in the bottom of the level, large rocks of mundic, of a splendid appearance, not more than 10 ft. or 12 ft. deep from the surface, which altogether indicates for copper in depth. We have commenced sinking our engine-shaft, to take the lode about 40 fms. deep, and are about half a mile from the clay-slate strata. We intend to cross-cut the lode in the 20 fm. level, where there is every reason to expect something of importance. Our operations will be confined to sinking the shaft, and driving to cut the south lode; as, in sinking, we shall be proving the mine more effectually than driving shallow levels. I have set 3 fms. to drive in the deep adit, at 4*l.* 10s. per fm., which will plainly show that the strata is favourable, being driving into a steep hill of granite; however, after the 3 fms. are driven, it will somewhat prove the lode; after which, we shall abandon the end, and force on our engine-shaft.

WHIDDEN.—Captain J. Kenrick (Aug. 7) reports—The ground continues hard in the cross-cut south of caunter shaft; and, as it had become so difficult, I think it would be advisable to stop driving, and commence to sink caunter shaft, to cut the junction of the south lodes with the Whidden old lode, a point of much more importance to ascertain, and obtainable in about 30 fms. sinking. The large leader of tin, discovered in the stopes, in the bottom of the deep adit, on the old Whidden lode, would also be made available by this, and thus add to the necessity of sinking without further delay. There is no material alteration in the ground in the shallow adit; the lode is large, but generally poor.

FOREIGN MINES.

COPIAPO MINES.—The following mine report for April has been received:—

Copiapo, May 29.—Checo Mine.—A few days since I visited this mine, and found it exhibited a very encouraging appearance. One of the new ends that we started last month (the 35 fm. level, west of Harman's shaft) holds out great promise; indeed, we have a beautiful vein of rich ore—say, 30 per cent., and about 9 in. wide. Should this continue to improve, as it has in the last month, we shall soon find it will be of no small benefit. The other new level, referred to in my last, is at the 12 fm. level, on the north lode; it has a pretty appearance, and produces some stones of ore, but, as yet, does not assist us much in the produce. The stopes in the back of the 12 are yielding exceedingly well, but we cannot expect them to do so long, being so near the surface; we are, therefore, sinking a winze from the 12 to the 20 fms. level; after which we shall be able to drive an end east, in the last-mentioned level, which will lay open some new and, I have no doubt, excellent ground for stoping. The winze sinking below the 30 fm. level, east of Harman's shaft, is producing some good ore, and looks very promising to improve greatly before another month; the lode is 3 ft. wide, and has a metallic appearance throughout. The mine is, on the whole, greatly improved in the last month, although the increase in produce is very small; but it has this advantage, that the greater part of the produce for April has been broken in new ground, whereas the former produce was from old ground that has been laid open for years.

San Pedro.—In my last, I informed you that nearly all the stopes and old pitches had been worked away, without opening any new ground, and that it would require a few months to carry on exploring operations, before any increased produce could be expected. I also advised you, that we had started two new levels on the north lode—the one in the 10, and the other in the 15 fm. level; in the former, we have a very rich vein of ore, 6 in. wide, of more than 30 per cent. for copper, and have great hopes of its becoming wider, as we advance; this has greatly assisted us in the last month. The 15 end is also yielding some very rich stones of ore; and I fully believe, before another month, it will be as good, or better, than the 10 fathom level is at present. We have also commenced sinking another lode from the surface, which we shall call the new lode, and had not sunk more than 3 fms. before we came upon some very rich stones of ore. I have great expectations of finding a good branch of ore in this vein in the course of a month or two. What remain of the old stopes are yielding as well, or better, than I had expected, but are getting very small—so that we have little else, except our new ground, to trust to for future produce, yet I think we shall go on gradually increasing.

Farellon Mine.—We have two natives and one Englishman at this mine, preparing the halvans, but I have not had time to visit it in the last month, so as to give you an estimate of the quantity there, that will pay for washing and jigging.

Produce at Checo Mine for April, 32 tons; San Pedro, 28 tons; Farellon (dressed ore), 8 tons—total, 68 tons.

New Mine.—I have denounced a new mine, about 1½ league nearer to Malposo than your mine at Checo. In this sett that I have asked for, and which has been conceded, there are three fine lodes; one—the main lode—is 3 ft. wide, and exhibits bunches of ore at the surface, for a great length, that would produce from 8 to 10 per cent., which, I am persuaded, will improve in quality in a very few fathoms below. We shall commence working in a few (say, 15) days from this. Thomas Francis, who was a captain at Pampa Larga, and an excellent miner, I have appointed to take charge of it; and, if ever I had a strong hope of finding a good mine, I have that hope of this, to the fullest extent, and I feel, as it were, doubly satisfied by the very high opinion entertained of it by Capts. Faull and Anncar, both of whom I took to see it, and have, therefore, determined on a hopeful name for it—viz.: "La Esperanza."

The *Cuba*, with 514 tons of copper ore, was to sail from Valparaiso, on the 1st June, for Swansea. Another vessel had been taken up, and was shortly expected at Copiapo, to load a cargo for account of the company.

NATIONAL BRAZILIAN MINES.—The agent's report (May 22) states—The proceedings in the Cocaes mining department have been carried on in the usual manner, and no perceivable alteration has taken place, although the gold return for the last 10 days is a little more favourable than quoted in the last report. The sink, and Oxenford's north stope, are the only two points from which any considerable quantity of productive stone has been had for some time; but we hope, by the end of the present week, that a full supply will be obtained from the several stopes laid open, but which are suspended for a few days, in order to complete the whim, new incline plane, &c., so that operations may be resumed at Collett's stope as speedily as possible. Produce from Cocaes from the 14th to 23d May, 8 mcs. 0 oz. 5 dits. 22 grs.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY.....Great Northern Railway—London Tavern, at Twelve.
Northampton and Banbury Railway—offices, at Two.
TUESDAY.....Newry, Warrenpoint, and Rostrevor Railway—offices, at One.
Southampton Dock Company—Southampton, at Twelve.
WEDNESDAY..Kilkenny & Great Southern and Western R'way—offices, Twelve for One.
London and Westminster Bank—offices, at One.
THURSDAY.....South-Eastern Railway—London-bridge Station—at One.
Eastern Counties Railway—London Tavern, at One.
Great Western Railway—Bristol, at One.
West Cornwall Railway—King's Arms Tavern, Westmin ter, at One.
FRIDAY.....London, Brighton, & South Coast R'way—London-bridge-house Hotel, One
Cork and Waterford Railway—London Tavern, at One.
SATURDAY.....Northern and Eastern Railway—offices, at One.

DEAN PRIOR AND BUCKFASTLEIGH MINING COMPANY.

The two-monthly meeting of adventurers was held at the offices, 25, Fleet-street, on Thursday, the 3d inst., to receive the report and accounts of the mine.

P. W. COURTENAY, Esq., in the chair.

The notice convening the meeting having been read, the purser submitted the accounts, which, having been audited by the committee, were passed.

The CHAIRMAN briefly observed, that the meeting had been called in accordance with the regulations of the company, under the Cost-book System, and a report from Capt. Carpenter, the superintending agent, would be read; the meeting would also have to determine on the course to be pursued with certain shares which had become forfeited, from non-payment of calls.

The report of Capt. Carpenter, under date the 8th inst., was then read, which will be found inserted under Mining Correspondence, whereupon Mr. C. ROBINS observed, that Capt. Carpenter, in his report, having referred to the inspection of the mine by Capt. Paull, he had merely to state, that such report was in his possession; but, having been made for a private party, he was only authorised to hand it over to the meeting on the payment of the expenses incurred (5*l.* 5s.).

The meeting having every confidence in Capt. Carpenter, and being no party to the inspection of the mine, or report of Capt. Paull, declined receiving the report on the terms proposed; and a resolution was accordingly carried, to the effect that Capt. Carpenter should transmit a supplemental report, more in detail, which will also be found in another column.

Mr. ENGLISH, in reply to a question put by the chairman, stated that he had proceeded to the mine with the view of collating information for the meeting, and had only returned that morning. He had had an interview with Capts. Carpenter, Paull, and Sprague, as also with Mr. Robins, and the concurrent testimony of the parties afforded the strongest evidence of the improvement of the mine, from the alteration in the strata, in sinking the shaft down to the 40 fm. level, which point would be arrived at in the course of a fortnight. It would, however, require full two months to take the lode at that level; and, in the meantime, the workings were confined to the main object, that of sinking the shaft, so as to limit the cost until such was accomplished.

Mr. ROBINS, who had acted as purser at the mine, begged to express his readiness to forego any remuneration for services so rendered, until the lode should have been cut in the 40 fm. level, and the mine be yielding returns. The list of adventurers having been submitted to the meeting, and it appearing that there were 20 shares in default, and which, by the regulations of the company had become forefeited, it was resolved, that the same be appropriated at a meeting to be called for that purpose, on the 11th inst.

From the reports of Mr. English and Mr. C. Robins, which were confirmatory in every sense of the opinions expressed by the agents, it was determined, that the operations of the mine should be prosecuted with energy; and that a further call of 1*l.* per share be made.—Thank having been voted, as is ordinarily the case on such occasions, to the commttee and chairman, the meeting separated.

A special general meeting was held on the 11th inst.,—Capt. P. COURTENAY, Esq., in the chair,—when the supplemental report of Capt. Carpenter, and thae under date the 9th inst., from Capt. Choake, were read.—The question of the issue of the forfeited shares (20 in number), having been brought before the meeting, it was resolved, that the same be re-issued, on the payment of the amount due on the respective shares, on or before the 18th inst.—There being no other business, the meeting adjourned.

GADAIR MINING COMPANY.

At a special general meeting of adventurers, held pursuant to circular, on Monday, the 7th inst—G. W. BLANCH, Esq., in the chair—the notice convening the meeting was read.

The accounts submitted at the previous meeting having been duly audited were submitted and passed, as also a statement of assetts and liabilities, from which it appeared, that a call of 3s. per share would be required, to liquidate the claims on the company.

The CHAIRMAN briefly stated the objects for which the meeting had been convened—that of passing the accounts up to the present time, and making a call, for the purpose of paying the same, and also taking such other measures as might be deemed expedient for the active prosecution of the mine, which, from the reports received, held out much promise; but the works had been retarded, in consequence of an arrangement agreed upon at the last meeting of adventurers, whereby the management of the affairs of the company was to have been removed to Manchester. That, however, not having been effected, he would suggest that a managing committee be at once appointed, who should remain in office for two months; and that meetings of the adventurers should be held every alternate month, when the accounts should be submitted, and such calls as might appear necessary be made; and further, that no debts, or liabilities, be contracted.

A general conversation arose on the prospects of the mine, and the course to be pursued, which terminated in the appointment of Messrs. Blanch J. Truscott, and H. English as the committee for the next two months—the meeting of adventurers being fixed for the first Tuesday in every alternate month. A call of 3s. per share was made, to meet the claims on the company, and a further call of 2s. 6d. per share for the next two months, to prosecute the working of the mine, it being understood that, in the interim, the committee would ascertain the nature and cost of machinery required, size of engine, &c., and report accordingly.

On the question being put as to the appointment of a purser, and also the necessary arrangement for the manangement of the affairs of the company in London, Mr. English proffered the use of his offices gratuitously for the next four months, as also his services as honorary purser, which offer was readily accepted, and thanks tendered to that gentleman for his liberal offer.

It appearing that certain shares were in arrear, or had not been taken up, it was resolved, that the shares of which the company was constituted should henceforth be 3540; and that, in case any shareholder should wish to withdraw from the undertaking, he should be at full liberty so to do, on payment of his proportion of the claims or debts due from the mine, estimated at 3s. per share, such course being in accordance with the Cost-book System. It was further determined upon, that the mine should be carried on with energy, and a strict adherence to the Cost-book System, whereby responsibilities are avoided, and the management of the affairs of the company placed in the hands of the adventurers, who, from time to time, may depute authority to a committee.

A vote of thanks having been carried to the chairman, the meeting separated, having passed a series of resolutions, which appear in our advertising columns.

RHOSWYDDOL AND BACHEIDDON LEAD MINES.

The bi-monthly meeting of adventurers in the above mines was held, pursuant to circular, at the offices of the company, Old Jewry, on Tuesday, the 8th inst., when the following report of Capt. Davies, for the two months ending 29th July, was submitted to the meeting:—

Prosser's Level.—During the month of June the men cut the level further, in the east end, 14 yards along the lode. This cutting did not discover any fresh orey ground. Finding it so, I brought the men back to the great cross-cut they had been before driving, to go under the smithy level; on this they have been working through the whole of last month, and are now continuing so. The ground is very stiff for a clay slate—the men having cut only 11 yards. The object of this cross-cut has previously been explained.

In *Webster's Cross* 14 yards have been cut. The lode here continues very wide and strong. Strings of lead ore have been discovered in several places, but not the run from the field-shaft; this cross is not in a direct line, but part to the north, part east, and a part to the west. This we were forced to do, on account of the great width of the lode; and after all this cutting, I am of opinion there is a part of the lode still further north; but as the men were wanted for the present in the field-shaft, to open further orey ground there, they were removed to that part which we now call the 10 fathom level.

Field-Shaft.—The men have been working on an exceedingly rich piece of orey ground; the length they stope is 10 yards—this is orey all the way. At times the lead is 2 feet wide, nearly solid, and cut in pieces as large as the men with difficulty can turn over. Before I have to send my next report, the men will have worked this stope up to the field-level. I have already anticipated this, and brought the men from Webster's Cross, to open a new piece of orey ground.

The Ten Fathom Level.—Here a set of men have been driving in the east end; the ground is hard, but is very promising, being the run from the shaft. The lead in the breast is nearly 2 feet wide, and is improving.

Smithy Level.—During the last two months the ground was more favourable than otherwise for driving. The lode exhibits very favourable indications in the end; there is a fine flookan on the wall, and in the lode there is quartz, black-jack, and strings of lead.

Nant Level.—Having worked here in June, I must notice the result, which is quite the same as former months—the lead at times better, at others worse. On account of the immense width of the lode, and the expense of cartage to the mill, I have relinquished working here (according to the plans I laid down when in London) till the smithy level is brought under the shaft. There is now 374 feet of orey ground opened, for the level to come under.

We are taking ore out of the rough, and crushing, but not dressing any; all the lead we now cut is brought out to near the mill, by railway, through Prosser's level—there taken out of the rough, and wheeled to the mill at once. We will find the cost of dressing very much diminished in the mode we have now adopted.

The accounts of receipts and expenditure, for the past two months, were laid upon the table; and, after some few observations of a congratulatory nature,

and expressing the satisfaction of the adventurers present with the operations at the mine, and the prospects it presented, the meeting separated.

WEST WHEAL MARIA MINING COMPANY.

At a general two-monthly meeting, held at the offices, St. Michael's-alley, Cornhill, on Thursday last, the 10th inst.,—C. Bailey, Esq., in the chair,—the following statement of accounts was produced:—

Balance at bankers, 8th June	£	52	16	10		
Calls paid to bankers	459	15	0	—	512	11 10
By cash paid May cost	£92	10	5			
By cash paid June cost	82	11	2	—	175	1 7
Balance at bankers'					£337	10 3

ASSETS AND LIABILITIES.

Liabilities.—Due to merchants 8th June	£710	3	0			
Due on May and June cost	45	18	0			
July and August cost, estimated at	220	0	0			
Balance	46	9	3	—	1022	10 3
Assets.—By balance at bankers	£337	10	3			
Ditto in hands of Messrs. Coode, Brown, & Co.	108	19	0			
Arrears of calls	576	10	0	—	1022	10 0

Balance, 46*l.* 9*s.* 3*d.*; estimated value of engine, materials, &c., 1280*l.* 19*s.*=1327*l.* 8*s.* 3*d.*

The appearance of the mine not warranting any further outlay, it was resolved, that the operations be immediately suspended, and that the committee of management be empowered to wind up the affairs of the company—to sell, by public auction, or otherwise, the engine, materials, &c., and to dispose of the sett, and to pay off all liabilities of the company.

Legal proceedings are to be taken to recover all arrears of calls which may remain unpaid after the 21st inst.—The thanks of the shareholders having been passed to the committee of management—Messrs. J. Browne, C. Bailey, and J. Y. Watson—the meeting adjourned.

TRENANCE MINES COMPANY.

In the Journal of the 29th July, we gave a report of the meeting of proprietors, held at the offices on the previous Friday, in which reference was made to a lengthy communication, which had been received from the agent, detailing the present position and prospects of the undertaking. We have since received the following extracts from Capt. Dalton's report, for publication:—

July 26.—Before entering minutely into details as to the future prospects of the mines, I beg to call your attention to the work which has been done since the last general meeting, what ground has been opened on in search of minerals, and to ascertain generally the metalliferous nature of these hitherto unproved rocks, with the results thereof, from which some more decisive conclusion may be drawn, as to their prospects and future mode of operations.

In January last, we had commenced sinking a winze (No. 1) from the 12 fm. level (Maria) to the level of the deep adit, and had, at the same time, commenced a south level from the deep adit (marked No. 2 on the plan) to meet it. The inducement which led us to unwater this part of the mines, was the raising of a quantity of fine malleable copper and red oxide of copper, mentioned in the last general report. This winze has now been sunk to the depth of 10 fms., and the deep adit level driven about 15 fms., which has been by far the hardest ground worked in the mines; but, last week a decided change having taken place, we expect very shortly to form the intended communication. Sample No. 1 was taken from this pitch.

It was particularly noticed, while sinking this winze (No. 1), that the ore passed, independent of its natural dip as a lode, from a southerly to a northerly direction. Consequently, by the time the winze was sunk 16 or 18 ft., the ore disappeared altogether in it, and, during the sinking to the depth just mentioned, was not again seen. This appearance, with others which will be noticed in their proper places, may tend to form some opinion as to the position in which the copper lodes may be found in the serpentine.

In February last, we continued driving the level 12 fms. deep south of the Maria shaft (marked No. 3 on the plan), with a view of proving the ground, and getting the ore; but, after driving between 12 and 13 fms., and finding it contained no copper ore, we gave it up. This level has been driven in all 17 fms., during the driving of which we noticed two good walls, and the lode contained spar, steatite, greens, and crystallised iron, of which sample No. 2 is a portion.

We next commenced stoping up the bottom of the 8 fm. (Maria), and in many places cut through down to the 12 fm., for the purpose of working on the lode, and getting the ore; and, although I never anticipated the realisation of half the quantity reported by others, yet I was much disappointed in finding so little. The mineral was found to continue in extent only about 3 or 4 fms., the deepest part of which inclined towards the north.

In directing your attention to the north side of the deep adit, it may be remembered, that about January last we cut, in the 12 fm. level (Dalton), what was considered to be the junction of two lodes, from which one piece of thin malleable copper, 9 feet long, was taken, also a quantity of fine grey ore—part of the latter having a per centage of 78. These, with other appearances, induced us to commence a south level, on the course of the lode (No. 4 in the plan), during the driving of which we noticed two good walls, containing greens, steatite, good quantities of spar, and here and there yellow copper ore; and, when stoped, its appearance was two good walls, steatite, iron, soft spar, and rughs, slightly tinged with greens, very similar to the south 12 fm. (Maria), before mentioned. This level, which was driven 20½ fms. when we commenced stoping it up for ore, has led to the large masses of malleable copper and grey ore which have excited so much attention—samples of which were sent you from the mines on the 24th inst. As we shall have to speak hereafter more particularly on this part of the subject, we shall leave it at present, by merely observing, that the mineral part of this lode has continued much further in extent than any heretofore—there is considerably more gray ore, and its appearance is more of a settled character. We took last Saturday, with other ores, one piece of fine malleable copper, weighing between 2 and 3 cwt.; and, as soon as we had got it from its bed, one end of another piece presented itself.

We also commenced a north-east level (marked No. 5 on the plan), or rather a continuation of the one just described, but on the opposite side of the 12 fm. level (Dalton), which was driven only 4 fms., with a view of getting the ore, and ascertaining whether the lode crossed the 12 fm. level or not: the result led us to think that it did not cross it, or, at all events, in a straight line of direction. There were no appearances in this level to induce us to pursue it further; and, by reference to the plan, it will be seen that the dip of the mineral towards the north would cut out the bearing part of the lode in this level (the 12 fm.) We also commenced working on a vein of ore, south of the Dalton shaft, and about 8 fms. down it, which was seen where the lode was first discovered. This level (marked No. 6 on the plan) is divided into two parts (an instance in which the serpentine is observed to split the metallic veins); it was driven and stoped up 194 fms.; and, after taking up the body of ore which laid at the commencement of it, or junction, we found, here and there, pieces of yellow ore, seemingly unconnected with any other substance; also iron and steatite, with two good walls, in appearance as if diverging from a centre.

In January last, we commenced the north level (No. 7 on the plan) from the deep adit, to be continued under the 12 fm. level (Dalton), to unwater the same to the depth of 20 fms.; and, in April last, we were induced to commence sinking a winze from the 12 fm. level, to communicate with the north level, just described. In the sinking of this winze, we have been delayed by a large supply of water, which, in May last, increased so much, as to oblige us to abandon the work during that month, and, on the 1st inst., we were again put out, from the same cause. Being desirous of having the communication formed between this place and the deep adit level before the present meeting took place, I set on all the strength that could work at it, and succeeded in getting the water out, and keeping it down, but had not long resumed operations before another quantity broke in, and put the men all out again, though not before we had sunk nearly the required depth, and expect daily to have the water let down by the level which is driving near it. This winze has now been sunk to the depth of 10 fms., during the sinking of which the very same appearances were observed, with respect to the northern dip of the mineral, as was noticed in the 12 fm. level (Maria). We took up from the bottom of the winze, the last day it was worked, the sample (No. 3) of crystallised iron.

The amount of ground broken since January last, is 192 fms. 2 ft. 6 in. In speaking of the work done since January last, we may add, that a violent thunder storm having destroyed the house situated on the mines, we have since erected a good substantial stone house, in which reside the captain and his family, so that the mines are now safely guarded. Having now given you an account of the different operations in these mines since January last, I beg most particularly to call your attention to what may be considered the most important subject—viz.: the future prospects and operations. In doing this, I shall endeavour (rather than wish to lead by any opinion of my own) to lay before you, in a plain manner, the metalliferous appearances which this hitherto unexplored rock exhibits, and, to the best of my knowledge, the conclusions which two years' experience has led me, from time to time, to come to.

In order, therefore, to make myself better understood, I have divided the former part of this report into numbers, which, by the aid of the plan, may be rendered intelligible; and where I am, as a matter of duty, obliged to give an opinion, the same will be accompanied with such reasons as caused its formation—preferring this plan of putting you in possession of the same matter as myself, by which you can exercise your own judgment as to future operations, and, at the same time, take a proportional share of the responsibility. It has been asserted by some, that there is no mineral lode in the serpentine formation; we have proved this theoritical opinion to be erroneous—our extensive workings having exposed lodes containing iron, and other substances, lying between two regular walls; but I am bound to acknowledge, at the same time, that I think we shall not find in it a regular copper lode, which will pay for working, for the following reasons:—The formation of copper lodes in the serpentine appears different from those in other stratified rocks—the serpentine having more the appearance of a mass of heated matter, broken by contraction in cooling, which by the general settling, or otherwise, of the molten mass, the mineral has been forced up, as in sample No. 5, into the form or position in which we find it, and in all the different states of oxidisement, from virgin, or pure malleable copper, to that of red oxide, grey malachite, green, blue, and black oxide, and yellow ore, according to the degrees of heat in contact with the minerals—the yellow ore generally appearing at the extremities, or where we may have supposed the heat to have been the least. My next reason, which is a practical one, is that in all the different places where we have driven levels in search of copper ore, we have never yet met with a continuous lode, containing that metal; but, on the contrary, have found it either dipping down or running out, which latter has been generally indicated by the appearance of yellow ore, tending to show that the heat had not been sufficiently intense to drive off the sulphur contained in it. These appearances do not at all prove the non-existence of copper lodes in the serpentine, but tend to confirm an opinion which I have long entertained, relative to the position in which they may exhibit themselves in this rock, which brings us now to that part of the subject.

It was noticed, in the former part of this report (marked No. 1), that in the Maria shaft and lode, the ore did not extend further than 8 or 4 fms., and that, independent of its natural dip as a lode, the mineral passed rapidly down in a northward direction. The same appearances having been observed in the north part of the mines, and, indeed, wherever we have worked for ore, leads me to conclude (which is not an isolated case) that the ore lies in the form of pipe-work, which being forced up from some grand deposit, or formation, from beneath, we may (from the cooling and settling of the serpentine in different stages of combustion, or degrees of heat in different situations, and at different periods) imagine how this may take place, for the metal being the heaviest substance, by its specific gravity, would be forced up here and there, and only where it met with the least resistance from the pressure, or weight, above, it would naturally take such a form, and become pressed into the cracks and crevices exactly in the form in which we find it, and of which the sample before you (marked No. 4) is a corroborating proof. From the above, there is some reason in concluding that, by going deeper, the metal may be found in greater abundance; this we have so far proved to be the case—for instance, in commencing a foot or two in the ground, we found in the alluvial soil small pieces of malleable copper and rich grey ore, apparently unconnected with other substances: next, a very small vein running in different directions, which increased as we sunk deeper, till we got to the 8 fm. (Dalton), at which depth we took up what were justly considered the finest specimens ever raised in England; in proceeding in depth (not extent) to 10 and 12 fms., in the same pipe, we find much finer specimens, larger quantities of malleable copper, rich grey ore, malachite, and yellow ores. In proceeding to the depth of 16 or 17 fms., in the same pipe, we took up specimens of malleable copper and rich grey ores, the magnitude and weight of which cause all hitherto produced to sink into insignificance; and, while continuing deeper, we still keep finding the malleable copper and grey ore; and, for the first time, the black oxide of copper—a sample (marked No 5) of which is before you. Permit me here to diverge a little, by observing, that the specimen of malleable copper sent from the mines on the 8th inst., weighing 1568 lbs., was broken, and cut from other pieces of a similar description, the extreme point of which would have measured 30 ft., while the opposite end is now left projecting from the lode, the extent of which we know not; but to disturb which as present would be attended with danger. The sample of grey ore sent at the same date, the weight of which is 150 lbs., is only a piece broken from one eight times that weight; I would here remark, that the finding of grey, but particularly yellow, ore, is said to be much in favour of the future prospects of the mines, though contradictory to the expectations of all who have given an opinion—indeed, some persons have gone so far as to say, that yellow ore and mundic could not exist in the serpentine; the former we are daily finding, and the latter may be seen in quantities about ¼ miles from the mine, in the serpentine formation. These monster specimens, which were never before known to exist in England, may deservedly excite the attention, of not only the sanguine speculator, or the more deliberate thinker, but that also of all classes of the community who are at all interested in the welfare of the country, by exciting in them a desire to dive further into these hitherto unknown wonders, particularly when we find that what has hitherto been conjectured relative to this formation, has so far been proved by practice to be contradictiotory to all the theories formed of its mineral veins.

In taking a review of what has been advanced, I beg to ask, what conclusion can any observant mind come to?—from whence originate these large and valuable masses of virgin copper and rich ores? Why does that part of the lode, containing copper and its ores, have a northward dip, while the dip of the lode (in most places containing iron) is in an easterly direction? These queries, if they could be answered, unconnected with speculative theories, would, beyond doubt, assist you in coming to a safe conclusion upon future operations; but in the absence of such truly valuable information, all that can be done in the way of business is to use them as argument, and, by deliberate thought, try to discover whether these appearances, which are of themselves truly wonderful, will not justify a further outlay. One thing I believe, that to continue the driving of levels in this formation, merely in pursuit of ore (according to the present appearances), will only end in disappointment; nor should I be doing my duty, according to my own opinion, by advising such a step: I may be wrong, but I feel myself bound, at the same time, to say what I consider to be correct. If these opinions coincide with the feelings of the present meeting, a question naturally arises, what is next to be done? This brings me to the necessity of observing, that the speediest way to make these lucrative mines to adventurers, is by following the lode through the serpentine formation into another stratification—say the killas, which, when found there, may become regular, and have the same appearances as copper lodes have in the killas. I am not prepared to give any opinion as to the depth you would have to sink to arrive at this stratification, but would advise the company to possess themselves of the best information on this head, and act accordingly. One thing is certain, that the production of such prodigious masses of pure copper and rich ores, as have been raised from the Trenance Mines, which have astounded all who have beheld them, with, also, so far a practical knowledge, that they have increased in weight and value as the workings have become deeper, may justly excite the sanguine hopes of all connected with them, and I may further add, the particular attention of all scientific classes of the community. Having been requested to take into consideration the erection of a steam-engine, I have estimated the cost and erection of one, suitable to our purpose, of about 40 in. cylinder.

Permit me here, before I close this report, to apologise for the length thereof, and to add, in justification, that this being an important crisis relative to future operations, I am anxious of putting you in full possession of every information in my power, on all points, for and against, connected therewith; and, by so doing, I trust you will consider that I have only endeavoured to discharge faithfully my duty, and I would take it as a particular act of attention, if any of the shareholders would come down, and judge for themselves.—Richard Dalton, Purser.

TO THE PROPRIETORS OF THE ANGLO-MEXICAN MINT ASSOCIATION.

Gentlemen,—Being an executor to a deceased proprietor, and being otherwise interested in the prosperity of the Anglo-Mexican Mint Company, I regretted much that my absence from town on the 2d of May prevented my attendance at the annual meeting, when so flourishing a statement was given by the directors, and, what is better than directorial flourishes, so handsome a dividend was declared for the current year. But large dividends are not always tests of prosperity, as the present unfortunate position of the Mexican and South American Company—a company, in reality, *under the very same direction*—abundantly proves; and, having been informed by a friend of what passed at that meeting—for no annual report is ever printed or issued to the proprietors—and finding that he, like myself, required fuller explanations on certain points, I applied for such explanations, and have been refused them by the board of directors.

Now, it may be taken for granted, that concealment is never resorted to when there is no cause for concealment—in fact, there is no biped, except the owl, that naturally loves darkness rather than light. It seems to me, therefore, quite necessary that the proprietors of this association should insist upon having a full and exact explanation of the state of the company's affairs. The reasonable information I required from the board of direction was as follows:—1. The nature of the securities upon which 28,000*l.* of the association's funds had been lent *in this country?*—2. The period when these moneys were to be repaid?—3. What portion, if any, had been lent to the Mexican and South American Company? As I have before said, the Mexican and South American Company is, in reality, under the same system of direction and management as the Anglo-Mexican Mint. Both are scrip companies—both act upon the same rule of the directors knowing and doing everything, and the proprietors comparatively nothing—both have for their most active directors, W. H. Schneider and John Diston Powles, Esqs., and neither favour their scripholders with printed reports. The Mexican and South American, too, paid dividends; and the proprietors thought matters were going on as merry as a marriage bell, when they were all at once told that their affairs were in too bad a state for explanation; and that a call must be made to extricate the company from its difficulties. Now, proprietors of the Anglo-Mexican Mint, recollect, "that the things that were yesterday, may be to-morrow, *without* the actors being changed"—recollect that habits of business are not necessarily hereditary—and, above all, recollect that the funds of your company may be improvidently lent, or invested in as rash speculations as those of the Mexican and South American seem to have been. Unite, then, with me in satisfying ourselves that all is right. I have one other fact to state for your consideration; your most active director (Mr. Powles) is also a director in the Anglo-Mexican Mining Company, the Columbian Mining Company, and the New Grenada Mining Company; and these three companies, with funds nearly exhausted by ruinous outlays, are now winding up their affairs.

Charles-street, St. James's, August 3. C. Richardson.

ASTURIAN MINING COMPANY.

Sir,—Will you be kind enough to allow me a little space in your next Number, to observe to "Nil Desperandum," who assumes that in my letter to you of the 27th July, I was "influenced by some motive beyond that of informing your readers of the state of the Asturian Mines," that so far was I from having any object, good or evil, "*beyond that*," I never had such an object at all. My purpose was, first to defend myself and my fellow shareholders against the unfounded imputation, that our reluctance to pay calls had prevented the directors "from displaying, to a greater extent, the value of the mines;" and, secondly, I wished to guard the shareholders against being deceived by the statement, that "it is expected no further call, beyond the one due in August, will be required." To repel the first charge, it was incumbent on me to show that a large capital had been placed at the disposal of the directors, a considerable portion of which had been shamefully misapplied; and that the dissatisfaction of the shareholders was increased by a disingenuous attempt to "hoodwink," instead of instructing, them, by a balance-sheet prepared on a fallacious principle. My avowed object, therefore, required me to recite faults and failures. These only were essential to my case; and they are virtually admitted by "Nil Desperandum," when he tells you "Detector" has "exposed nothing that was not openly communicated at the last meeting." Those favourable points which "Nil Desperandum" offers in extenuation, were irrelevant to my case; and I should have "travelled out of the record," to have adverted to them. As to any concealment, or *suppression*, on my part, it is not only contrary to fact, but a misnomer and an impossibility. I have no power, even if so disposed, to *conceal* facts, which were communicated at a general meeting, published in your Journal, and printed and distributed to the shareholders. As well might I attempt to *conceal* the sun in a cloudless sky—I could shut my own eyes, but not those of others. The "expectation" that no further call will be required, is now cautiously transposed by "Nil Desperandum" into the less imposing and less pretending form, of "it is *doubtful* if another call will be required." To this already *dissolving view*, I must give a final *coup de grace*. I say then, that other calls *must* be made—the arrangement with the bankers making it imperative on the directors, in order to keep the balance due to them within certain limits. The bankers will say, "no song, no supper," or "no call, no credit."

I must beg to deny that I applied the term "dissolving views" ("Nil Desperandum" calls it funny) to the property of the company generally; I did apply it to the pretended assets. Mr. W., who is a good judge, told the directors to their face—*mirabile dictu*—that they were (it is quite shocking) *moonshine*, and yet he (audacious man) was not impaled, crucified, or even tarred and feathered. Moonshine, indeed! what a reflection on the Marquis of D., on whose solvability the value of some of the securities depends. The directors, having a good opinion of these assets, might, perhaps, do the shareholders the favour of declaring them to be a fund (sinking), on which they would, in future, charge the payment of their remuneration; and I should think there would be no very strong opposition to such a motion, particularly if the room be judiciously packed. Now, as to my "malignity"—what must "Nil Desperandum" think of Mr. W.? Perhaps, after all, the "head and front" of my offence—the *fons et origi mali*—may be traced to my wicked allusion to that notorious scheme—the "Royal North of Spain Railway." May I venture to ask "Nil Desperandum," if he was one of those who distinguished themselves by their zeal in *blowing it in?* If he formed one of that most illustrious party, I can easily account for his vexation; and, at the risk of increasing it, I shall conclude by saying—"Let the galled jade wince, my withers are unwrung."

August 10. Detector.

THE ASHBURTON MINES.

Sir,—In your Number, of the 22d ult., is a letter signed "J. B.," dated Devonport, which would have had immediate notice from myself; but I took for granted Prof. Ansted would have done so. Finding, however, he has been called abroad, I cannot refrain from troubling you with my ideas on "J. B.'s" jumble—I say jumble, for it is evident his object is not to trouble himself about his "friend's advice," nor indeed the Ashburton Mines at all; but, as one of the fraternity delighting in divining-rods and dark ways, considers the professor as one of a new generation (which, God knows, we want), and who would be likely to open our eyes, and teach men to look and think for themselves. It is but too evident, Sir, I say, that the worthy knight of the pick and gad—or, if he will be so called, "J. B."—merely takes that opportunity of sparting his dirty, but innocent, venom at the gentleman he has chosen to call a "good lecturer, but not a practical miner;" and then going on, he makes use of assertions which, if he knows anything at all of his would-be victim, he is well aware to be false; and, if he knows nothing of him, clearly proves his want of any claim to gentle blood or common decency. But, Sir, "J. B." does not show *his* "caution;" for, after making as wonder at his spontaneous assailments of a worthy man, he lets "the cat out of the bag," and tells us that the whole dirge of his little malevolence is, that a "pick and gadman" of the west has not been chosen to report upon the Ashburton Mines; and I do not for a moment doubt but our friend would like the chance, as he says, of himself and his worthy coadjutors undertaking "an inspection of all the unexplored mining districts of the United Kingdom" at the expense of London pockets; and I am sure I heartily wish the poor man employment; but he must excuse us, if we do not have him *solens volens*.

I wish to show "J. B." that a pretty fair chance has been given to his Royal county by the employment of the very person he is so anxious to serve; but we thought it time to look *further north*, when we found he had spent about 2000*l.* of our money, principally in erecting a large wheel perfectly out of proportion to the supply of water, even during the best part of the season. Even then our "practical miner" assured us he was busy preparing fine tin, when, after some months of costly work for tin, nearly the whole of it proved to be tungsten or wolfram. Now, Sir, after this, pray do not let us hear that "J. B." is surprised at our not being content with the opinions and services of a "practical man" from his favourite county. I could show you many more points equally objectionable which we have had to contend with; but I fear I have intruded too far on your well-known patience.

Aug. 3. A Shareholder in the Ashburton Mines.

MINING IN WALES.

Sir,—In your Journal of the 22d July, an article is inserted, under the head of "Mining in Wales," signed "H. J.," wherein the writer condemns, without a word of explanation, all the mines, quarries, and mineral property in and about Dolgelly, Merioneth. Now, it would have been much better, and far nearer the truth, if he had said, this district abounds with mineral riches in almost every direction, and there never has yet been any mine tried in a proper manner; but to say there are no metals, no good slate, and Merioneth is a profitless mineral county, I certainly should say, he is not right. In saying that there have been mad and overgrown wild speculations in the county, certainly is right; but when we find fault with others, we ought, at the same time, to be prepared to lay down a plan, whereby we may remedy the defects we complain of. Now, I do not know whether "H. J." is capable of doing this, but if he is not, I know of persons who are; and any Cornishman who goes into that county, and carefully examines it (as some mining captains lately have done), they will, and must, admit it presents to the speculator one of the most enticing opportunities of creating riches any one would wish to imagine. I have lately been employed by a public company, in making a somewhat extensive survey in Merioneth and Carnarvon, and, therefore, what I may now, or hereafter, say, is not imaginary, but from practical experience; and as the matter very likely will be taken up, as it ought to be, by the people in the county, I shall say little at present, but merely hereby outline what may be the subject matter for future discussion, and what most assuredly will be, for many years to come, a wide field for speculation. Near Dolgelly, on the banks of a fine river, is a lead lode, 6 ft. thick, running up to the surface; in the eyes of the miner this is indeed a treat; it is intermixed with a beautiful spar, and the lead is of the finest description; it contains, as near as I should imagine, about 20 ozs. of silver to the ton; it appears, as you look on the lode from the small excavation made, to be a solid rock of metal—more than an ordinary lode. I do not doubt the least that, with about 10 or 15 good Cornish pick and gad men, 100 tons per month may easily be raised. About one-quarter of a mile from this, there is another lead lode that has been worked on to about 20 fms. deep from surface; the mine was worked by horse-power; the lode in the end is now 14 in. perfectly solid lead; 50 tons a month might be easily obtained here also. There are some little mines, about six miles from Dolgelly, that I would engage to put in a course of working, with the necessary machinery complete, raise the ore, and send it to market, within three months from the date of commencement. The Cwmtresian gold mines are near Dolgelly; here is evident proof before our eyes that not only does Merioneth produce the base, but even the precious, metals. The public are very liberally permitted by the proprietor to visit those works. The produce of the workings, after being calcined, is said to contain 20 ozs. of gold to the ton of ore; it certainly contains a large quantity, which can be seen by vanning a small quantity in a shovel. It is a great pity those mines should be suspended; were they worked properly, I have an opinion princely fortunes would be realised in the valley above. There are other mines that hold out very promising indications, which have only been just opened at surface, and a few fathoms driven on the course of the lodes, and then stopped for want of public support. I will next extend my observations from Dolgelly to Dinas Mowddy and its neighbourhood. There are, on the Mowddy estate four mines commenced, neither of which have been carried out—they are called the Pennant, Foel Reide, Cowarch, and Cragwen. Now, any persons conversant with mining, who may visit those mines, will at once see the cause why the mines have not answered the expectations of the adventurers; they will find the fault is not in the mines, but in the system of mining—for instance, in the Pennant Mine, nearly three years have been expended, in driving an adit level, and sinking (by horse-power) a shaft 30 fms. deep, and the lode not yet cut; there are three or four very promising lodes in this sett. In the Cragwen, the mine was commenced half-way up towards the top of the mountain, instead of cutting the lode 20 or 30 fms. deep at its base, and driving from thence, which they ought to have done. Some very fine lead was cut in the level; and, if the works were conducted in a miner-like manner, what has been said about the prospects of the mine might even yet be verified. The Cowarch is the most extensively worked mine on the manor, and here an immense amount of time and capital has been expended in a very inconsistent manner; the mine, which has been working now some three or four years, is only even now down to the 20 fm. level, and which has been done by horse-power; and, although there are two powerful mountain streams close to the shaft, there is not a water-wheel, or a set of stamps, on the mine. A Cornish mining agent, who has lately visited the mine, reports very favourably on the prospects of this property, and has even made an offer with myself to work the mine by contract, engaging, at the same time, to return ore to market regularly every month. I am informed by one of the proprietors, that above 100 tons of lead was raised from the small piece of ground stoped away in the 10 fm. level. My own opinion is, this will some day prove a very good and lasting mine. Having now said sufficient on the mines, I will, ere I conclude, ask if ever Mr. "H. J." travelled from Dolgelly to Machynlleth?—did he ever hear of, or see, the Idris, the Gaewern, the Aberthevenny Slate Quarries?—did he ever hear of the fine vein of blue slate on the banks of Tallthyr Lake?—is he aware that on the Mowddy manor, through the Moel Dinas Mountain, there is one of the finest veins of blue rock slate in North Wales? If he is not, I can tell him there is, and of sufficient extent to supply the whole of this country with that commodity. As the manager of the Coombe Valley Slate Company, and other works of a similar kind, I profess to have some little idea of mines and quarries, and do not hesitate a moment in saying Mr. "H. J." is not right.—C. S. Richardson, C.E.: *Whitefriars-street, London, July* 10.

SOUTH WHEAL BETSEY—PRACTICAL MINING.

Sir,—When men attempt to penetrate into the causes of the various effects that come under their daily observations, while searching the bowels of the earth, they must, at all events, confess how weak and limited their understandings are. How vain would it be on my part to state to the public that I have discovered a rule that Nature hath laid down, so as to distinguish the correct mode of discovering rich deposits of mineral. It is true, by long experience in different mines and localities, we can, to a certain extent, predict the future results—that is to say, when a lode is opened at the surface, whether it has such properties as to warrant the outlay of capital to cut the lode to a greater depth; and whether the strata surrounding the lode is congenial for the expected mineral, whether it be copper, lead, or tin. Now, Mr. Editor, I had not the least idea when I wrote the report of South Wheal Betsey for your insertion, a few weeks since, that I should again trouble you on the subject of cross-courses, heaves, &c. I do not know why your correspondent should be so anxious to have my reasons for believing a north and south course cannot be *here* by an east and west one; but, as the question is so fairly asked, I beg to lay before you my positive reasons.—1. In the locality, or vicinity, of the above mine, there is no elvan dyke crossing the lode, that I know of.—2. The adjoining mine (Great Wheal Betsey) that hath been worked upwards of 50 years, was entirely confined to the same lodes, and no cause ever seen to expect that it would be here in the south part of the sett, where we are now working.—3. We can trace the same lode at the surface upwards of half a mile in a direct course with that of Old Wheal Betsey, and can prove it to be one and the same lode.—4. To convince the public that the statement made by that individual is wrong, we have cut a lode that is visible in Wheal Betsey deep adit, within 1 ft. 10 in., to our calculation, by our east cross-cut, upwards of 200 fms. south from the point where the deep adit intersected it; and, if the main lode takes its regular course, we shall shortly convince our op-

ponent of his error—that is to say, if he is not convinced already.—5. No practical man would ever be so imprudent as to assert, that a north and south course can be virtually hove by an east and west one, without an extraordinary cause, and then not effectually. However, I can only speak from my own experience. I have been a miner for 30 years—or, at least, ever since I was 10 years of age; I have been employed in the subterraneous caverns in Cornwall and Devon, during which time I have visited a great many mines; and the only north and south course that I ever saw affected by an east and west one, was that of Johnson's lode, in the Callington Mines. Here, it is true, the north and south course is somewhat moved by the east and west; but, then, Mr. Editor, permit me to state the cause of this extraordinary effect. I believe Johnson's lode carries a small flookan on the footwall; and the lode itself being a large champion, composed of mundic and black capel, or hornstone, and running through a soft clay-slate, and an elvan dyke crossing the north and south course, rather in an oblique direction, not many fathoms to the north of the point where Johnson's lode came in contact with it, here it is reasonable to expect, that the force of this champion lode, with the assistance of the elvan, had a tendency to dislocate, to a small extent, the north and south course; but, notwithstanding, it is not a complete *heave*. Now, Sir, whether those effects are produced by the polar forces, or by electricity, I leave to those who profess a greater *talent* than myself to explain. I do not wish to aspire after things beyond the bounds of my weak capacity.

In the Holmbush Mine, we see sufficient to astonish the greater and wiser of men. Never was there a grander scene, if rightly looked into, than can be viewed there; there is a high hill of granite to the east, and a large elvan lying on the hard primary rock, and in the valley fields of clay-slate, for upwards of half-a-mile on the elvan or horblende rock. Wall's shaft, in the valley, being sunk 100 fms., intersected the elvan; but this hard rock had not the least effect in heaving the lode, or in any degree disordering it, until it gradually gave way, to the severance of the rock in its horizontal course. For a great many fathoms to the west, the country is full, or impregnated with veins, or fibres, of mineral properties, which gradually, one after the other, intersect the lode, making large bunches of copper, until it reached the north and south course, where are to be seen the most beautiful works of Nature, which, to the reflecting mind, must be highly gratifying The lode here to the back of the 100 fm. level, near Hitchens's shaft, is surrounded with small cross-courses; and every *three* or *four* feet, the lode splices itself in the most beautiful order. I have often admired the works of Nature in this; but am still at a loss to know the effect that causes those splices, and the lode being extraordinarily rich around them, while a few fathoms further west, scarce any copper is to be seen, but the strata entirely congenial for lead. But what most surprised me was, that the dip of shelf had equal, or greater, effect in heaving the lode than the cross-course. In looking at the bearing of the cross-course at the two points, I should consider the lode to be *hove* north, instead of south; but my views in this might be altogether wrong. There have been many fathoms driven north by the directions of competent and practicable judges (one of whom is numbered with the cold clods of the valley), but to no effect—the lode being hove south, instead of north. In the Great United Mines, I saw, many years since, something of a similar character, where there were many of those cross veins, which had a tendency to enrich the lodes. In Poldice and Wheal Unity, we see those grand effects that are caused by the surrounding deposits, which are visible at surface. I think, if we look into the different stratum in Cornwall or Devon, we shall find but few mines likely to do well on copper lodes without elvan, or cross-courses. For my own part, I have never yet seen a mine productive without elvans or cross-courses in the vicinity, except it is in a granite strata. But to turn to the question of *heaves*—I agree with the old miner, that it is possible for an east and west lode, that carries *flookan*, to somewhat affect a north and south course; but not a complete heave. I compare a north and south course to a monster in the wilderness—his power is too great to be completely overcome by the weak object that would withstand him; he may be pushed out of his path for one step, but is sure to speedily regain it.

Downgate, August 3, 1848. JOHN SPARGO.

We have to direct attention to the advertisement of the proposed smelting association, adverted to in our columns of late. The statistics there introduced will, doubtless, be conclusive as to the importance, indeed, the necessity, of some measure of the kind for the protection of the miner, whether at home or abroad. We have, in a leading article, adopted some of the figures introduced, with others pertaining to the subject, and, doubt not, but that it will be not only well canvassed by those interested in mines, but lead to communications from correspondents, and thus enhance the value to be attached to the question.

BUDNICK CONSOLS.—A meeting of adventurers was held at the mine, on Monday last, when the accounts for May and June were passed, as follows:—To balance from last account, 286*l.* 15s. 3d.; costs, &c., 853*l.* 6s. 1d.; share of materials on relinquishments in March, April, and May, 187*l.* 15s. 8d. = 1327*l.* 17s.—By ores sold (less dues), 810*l.* 5s. 2d.; carriage of tin, 15*l.* 1s. 5d.; = 825*l.* 6s. 7d.; balance carried to next account, 502*l.* 10s. 5d.—Out of this balance, 356*l.* 14s. 4d. have been paid on shares relinquished. The loss on the two months' working was only about 25*l.*

CONDURROW.—A meeting of adventurers was held at the mine, on Tuesday, the 8th inst., when the accounts were presented, showing—Balance due to purser, end of May, 271*l.* 11s. 11d.; Labour cost, June and July, 722*l.* 9s. 6d.; merchants' bills, 209*l.* 8s. 8d.; dues of ore sold 1st June (1-20th), 38*l.* 18s. 7d.; ditto of tin sold to Angarrack Smelting Company, 5th Aug. (1-20th), 10*l.* 7s. 4d. =1252*l.* 16s.—By ores sold 1st of June, 778*l.* 12s. 2d.; tin sold 5th August, 207*l.* 6s. 6d.; leaving a balance of 266*l.* 17s. 4d.—The accounts were examined and allowed. We shall give the report in our next.

WEST WHEAL BASSET.—A meeting of adventurers was held at the mine, on Friday, the 4th inst., when the statement of accounts was presented, showing—Labour cost for March, 77*l.* 5s. 4d.; ditto April, 69*l.* 11s. 1d.; ditto May, 64*l.* 5s. 7d.; ditto June, 68*l.* 13s. 7d.; merchants' bills, 147*l.* 6s. 6d. = 427*l.* 2s. 1d.—By copper ores sold, April 6, 9 tons 11 cwts. (less lord's dues, 8*l.* 10s. 2d.). 52*l.* 13s. 7d.—leaving loss of 374*l.* 8s. 6d. The accounts were allowed; and, in consequence of several adventurers wishing to retire from this mine, it was resolved—That the mine and materials be offered for sale by auction on the 28th inst., on which day a meeting of adventurers will be held.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

CARTHEW CONSOLS.—The operations here are progressing with activity, the 66-inch cylinder engine being in course of erection, and which is expected shortly to go to work. The slide has been cut through north in the adit level, and is found to hold well; the leader, which is orey ground, being about 6 in. wide—the lode being, on an average, about 2½ feet. The adit level is being driven, and the end looking kindly.

EAST CROWNDALE.—As promised you in my last, I have now to inform you, that the lode at Rix Hill has considerably improved since I last wrote; the south lode in the adit level is worth nearly 50*l.* per fm., and the stopes, in the back of this level, are much richer than I expected to find them. There are two lodes now coming into Diamond's shaft, both of which are likely to unite very soon, at which junction there is every probability of a good course of tin.—Other mines in the locality are looking just as last reported. Wheal Anderton, adjoining Rix Hill, is still very productive.

PENHALE.—We are progressing beyond expectation—the east and west lode discovered, which forms a caunter to the main lode, from which the large bodies of ore have been heretofore raised, has yielded from 3 to 4 tons of rich silver-lead ore by a "pare." The engine went to work on Saturday last, and is doing its duty well, so as to enable the dressers to proceed at surface, having been precluded from so doing of late, in consequence of the want of water. There is a considerable quantity—say, 50 tons of ore at surface, which can be pencelled without washing, in addition to that in course of dressing for market; which, together, will make 100 to 110 tons. The ends are looking well, and large blocks of ore are in course of raising.

POLSAITH CONSOLS.—They are sinking a winze, and rising to meet it; when this is holed, some tribute pitches will be set. The mine is looking extremely well; and the adventurers may feel pretty confident that further discoveries will shortly be made.

SOUTH MOLTON CONSOLS.—The engine at this mine will be set to work during the week; the ground in the shaft is reported to be favourable. As soon as the 12 fm. level is drained, some fine branches of lead will be exposed to view.

SOUTH WHEAL BASSET.—The mine never looked so well as she does at the present time; the different ends and rises are worth 140*l.* per fm. On Williams's lode alone, there is 2120 tons of ore discovered, which will make an average produce of 13 to 14 per cent. And the tin-stuff now raising on Carn Kye lode is worth 8*l.* per ton in the stone, consequently, it must prove very rich for tin. In consequence of the low standard, they have not a tributer or man stoping on Williams's lode, but merely keeping the levels going and rising from one level to the other, for the purpose of ventilation; and will, therefore, be prepared to come into the market advantageously, and give good dividends, when the price of copper is more remunerative.

TERRANE.—The bottom end going north is improved, and worth full 25 cwt. of ore per fm.; and other parts of the mine is represented as improving.

WHEAL MARY ANN presents no important change, and they sampled 60 tons of ore on Friday last.

WHEAL TRELAWNY.—I have recently visited this mine and its locality; the lode in the 62 fm. level north is 2 ft. wide, composed of can and lead, and will turn out 2 tons of ore per fm.; it is represented as the best lode ever seen in the mine; the lode in the 62 fm. level south, is yielding 7 cwts. of ore per fm. In the rise, the lode near the 42 end north, is worth nearly 1 ton per fm. In driving north of Smith's shaft, the lode is 1 ft. wide, very regular, but not rich; an improvement is expected here. The lode in the winze, under the 30 fm. level, is worth 10 cwt. per fm. The other parts of the mine at present are as usual. They purpose sampling 90 tons next week.

THE COPPER MINERS' COMPANY.

In the *Mining Journal* of the 3d June last, we gave the particulars of a case (Lord *v.* Company) which had been argued on the previous day, before the Vice-Chancellor KNIGHT BRUCE. The cause was again proceeded with, in the Vice-Chancellor's Court, on Monday last, when it appeared, that the bill had since been amended, and fresh demurrers put in to the amended bill, for want of equity. The company was established by letters patent of August 3, 1691. The plaintiff, who instituted the suit on behalf of himself and all other shareholders, except the defendants, alleged by his bill that he had had allotted to him 200 perpetual shares in the company, and that he and other shareholders, or corporators of the copartnership, became such shareholders, or corporators, on the faith and understanding that the capital stock of the co-partnership raisable (independently of an authority given to the court of assistants at a general meeting of the 8th of May, 1846) was limited to the sum of 650,000*l.*, and that the court of assistants had no authority (except such authority as last aforesaid) to increase the capital stock of the copartnership beyond the sum of 650,000*l.* mentioned in their prospectus as the utmost amount of such stock; but that the court had, in excess of the authority in that behalf, increased such stock to a very great extent; and that, although the company had no power or authority whatever, without the consent and sanction of every individual shareholder or corporator, to convert any of the preferential shares, or any of the scrip certificates, into debentures, or promissory or loan notes of the company, yet the court of assistants had, previously to the 13th Oct., 1847, in excess of their authority, borrowed or raised divers sums of money of or from the defendants, the Bank of England, and that the Bank of England was the owner and holder of, and had also advanced considerable sums to various parties on the security of divers debentures, or loan or promissory notes, sealed with the common seal of, or purporting to be a charge upon, the Company of Copper Miners, payable at long dates, and having then many years to run, and also on the deposit of preferential shares or scrip certificates of preference shares in the copartnership; that the Bank of England being applied to for further advances, declined to make any, unless the whole of its past advances and claims against the company, in respect of such debentures, or loan or promissory notes, or other securities, were secured by a mortgage of the property of the company, and unless the whole of the moneys so payable at long dates were made payable immediately; that the court of assistants agreed to the terms so stipulated for by the defendants, the governor and company of the Bank of England; and it was arranged between the Bank and the court of assistants that the consent of a meeting of the shareholders, or corporators, should be obtained, and that the consent of the meeting of the Company of Copper Miners was obtained in Oct., 1847, to such arrangement with the Bank of England, under circumstances of concealment and coercion alleged and set forth in the bill; and that, according to this arrangement, the court of assistants had some time since also placed the common seal of the company to a warrant of attorney, to confess judgment against them, in favour of the Bank of England, for 270,000*l.* and interest. The bill charged that the mortgage to the Bank of England was procured from the shareholders, or corporators, by undue concealment and pressure, and that the same ought to be declared void. It also stated, that during the whole of the transactions the Bank of England, and all persons who accepted and were the holders or owners of any security purporting to affect the company, had full notice of the charter, and that the court of assistants were the officers of the company, and trustees for the plaintiff and the other shareholders, and were acting contrary to their duty, and in derogation of the rights of the complainant and the other shareholders and corporators, and that it was the duty of the Bank of England, and all such other persons, to ascertain the extent of the powers of the court; and the bill prayed for a declaration that the mortgage was improperly obtained from the Company of Copper Miners in England, and that the same was void, and might be delivered up to be cancelled, and that the Bank of England might be restrained from issuing execution on their judgment. The bill was filed against the Company of Copper Miners, the court of assistants, and the Bank of England, as defendants. The company and the court of assistants demurred to the amended bill.

Mr. WIGRAM, Mr. BACON, and Mr. WILCOCK, for the defendants, contended that the plaintiff had no such interest as entitled him to the relief sought by the bill, and they cited Mozley *v.* Alston (1 Phillips, 790), and Foss *v.* Harbottle (2 Hare, 461).

The VICE-CHANCELLOR, without hearing Mr. Russell and Mr. Hobhouse, who appeared to support the bill, said he thought the plaintiff had stated a sufficient case for equitable relief, and that the demurrers must be overruled. His honour did not conceive that, in pronouncing this decision, he was in any degree contravening the cases cited, or any other authority. The time for answering could not be extended beyond Oct. 1, unless the plaintiff consented. The plaintiff declined giving such consent, and the time was accordingly limited to Oct. 1.

THE MAESTIG IRON COMPANY.

On Tuesday last, being the day appointed for the last examination of the directors, at the Bristol District Court of Bankruptcy, Mr. SEWELL (solicitor to the fiat) stated, that he appeared on behalf of the assignees, and several large creditors in London, for the purpose of applying to the Court to postpone the passing of the bankrupts, until sufficient time had been afforded the creditors to investigate the balance-sheet. If his Honour would cast his eye over the items, he would see that they not only comprised sums of great magnitude, but also that the transactions to which they referred were of a nature to require explanation. The bankrupts were iron-manufacturers, and, as such, their business was, not to buy, but to make and sell iron; but the claims of many of the principal creditors had been incurred on account of iron purchased by the bankrupts for credit, and sold by them almost immediately for cash. It would be seen, also, upon the balance-sheet, that large sums had been abstracted from the Maestig Iron Company, and paid over to another concern with which the bankrupts were connected, called the Vale of Neath Brewery; under these circumstances, he submitted that the creditors were entitled to an allowance of sufficient time to investigate the balance-sheet.

Mr. SPENDER, one of the bankrupts, craved permission to say a few words in support of the very reasonable application of Mr. Sewell, in which, on behalf of himself and his friend Mr. Wood, he entirely concurred. He considered that there should be an adjournment for two reasons—first, because it was right that the creditors should have time afforded them to inspect and examine the accounts; and, secondly, because he and Mr. Wood were anxious to show the limited extent to which they had acquiesced in the transactions to which Mr. Sewell had referred. They were not at the time at all aware of the great amount of those transactions; and the moment they did become acquainted with them, they convened a meeting of creditors, laid the matter before them, and placed the property in their hands. On his own behalf, and that of his friend Mr. Wood, then, he wished to strengthen Mr. Sewell's application.

A good deal of conversation ensued as to the extent to which the accounts ought to be amended; at length

His HONOUR directed that a new balance-sheet should be filed, together with a cash and stock account, commencing at the same period as the commencement of the balance-sheet, a statement of the transactions with the Vale of Neath Brewery Company, and a cash account of the dealings between the concern and the Maesteg Iron-Works, a separate account of the inspectorship of the latter works, and also copies of all mortgages, wills, settlements, &c., referred to in the separate balance-sheet. The examination was then adjourned.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The eighteenth anniversary of the association commenced, at Swansea, on Wednesday last, under the presidency of Sir R. H. Inglis, Bart. This being the first of the meetings in the Principality, quite a sensation has been created, not only in Swansea and its neighbourhood, but throughout the whole of the surrounding counties; and every gentleman's mansion in the neighbourhood has been thrown open for the entertainment of the distinguished visitors. The different sections commenced holding their meetings on Thursday, and will continue them daily during the sitting of the association. Lectures also will be delivered on the "Metallurgical Operations of Swansea and its Neighbourhood," by Dr. Percy, F.R.S.; and on "Recent Microscopical Discoveries," by Dr. W. Carpenter. Excursions also have been planned to the interesting points of the sea coast, the mining valleys of the interior, and the works and manufactories of the neighbourhood. As on previous occasions, we shall publish a copious digest of the proceedings—giving those papers entire which treat on subjects interesting to the readers of our Journal.

THE CHOLERA.—The gradual, but steady, approach of this fearful plague to our own shores, has naturally awakened a considerable degree of anxiety in the minds of all thinking men. We are glad to percieve, however, that not only is the watchful eye of Government directed to the progress of this terrible malady, but that the subject of its character, causes, and treatment, is engaging the attention of science. We are given to understand, that a lecture will this day be delivered by Mr. Isham Baggs, at the Royal Polytechnic Institution, "On Cholera, and its Dependence on the Electrical State of the Atmosphere;" and, we are further informed, that such a chain of evidence will be established by that gentlemen, in reference to the connection of these two mysterious agencies, as to render our successful opposition to its further inroads a matter of extreme probability. It is our intention to be present at the lecture; and, if we are not disappointed in its issue, our readers shall be furnished with its details in the next Number of the *Mining Journal*.

Tresavean Mine.—As Wm. Jenkin, aged 19 years, was at work in Tresavean Mine, a stone fell from above and struck him in the neck; and, before any assistance could possibly be obtained, he was a corpse.

Plymouth Colliery, Merthyr.—T. Williams, aged 25, was killed by a fall of rubbish and a large stone in one of the coal-pits.

Sherburn Hill Colliery, Durham.—William Thornton fell from the rope which was drawing him up the shaft, and was precipitated to the bottom, a depth of between 30 fms. and 40 fms., and was killed—one of his legs, as also one arm, were severed from his body.

Colliery Accident.—As Wm. Williams, a hitcher at the Pentrefelin Colliery, Tircenol, Morriston, was engaged, on the 3d inst., in fastening some of the waggons used in the colliery to the platform, a stone, weighing about two pounds, fell from the roof on the back part of his head, and so injured him, that he expired on the same evening. He has left a widow and two children.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 9 per Cent., 197½	Belgian, 4½ per Cent., 67
3 per Cent. Reduced Ann., 86½ ¼	Dutch, 2½ per Cent., 43½ 3
3 per Cent. Consols Ann., 86½ 6	Brazilian, 5 per Cent., 70½
3½ per Cent. Ann., 87½ 6½	Chilian, 6 per Cent., 85½
Long Annuities, 8½	Mexican 5 per Cent., 16½ ¼
India Stock, 10½ per Cent., 243 40	Russian, 5 per Cent., 99½
3 per Cent. Consols for Acct, 86½ ¼	Spanish, 5 per Cent, 12 11½
Exchequer Bills, 1000*l.* 2d. 34 33 32 pm.	Ditto 3 per Cent., 22

MINES.—The mining share market has assumed a much better tone than for some time past; and, from the business actually done, and inquiries making, we may fairly anticipate further improvement during the forthcoming week.

Wheal Trehane is reported to have improved in the bottom level, and several shares have consequently changed hands.

South Wheal Francis, and South Wheal Basset have been sought for during the week, but we do not hear of any transactions. Among the improvements advised by the official reports, may be noticed those of Bedford United, East Tamar, and West Wheal Jewel; the latter mine is represented to appear better than she has for the past two years. East Crowndales have been inquired for, and business done, at improved prices. Trethellan and Barrier are stated to have improved.

Shares in the following mines are stated to have been done this week—viz.: East Wheal Rose, North Pool, Treviskey and Barrier, West Caradon, Trehane, Condurrow, Herodsfoot, Pennant, East Tamar, Gwincar Consols, Trelawny, Wheal Coad, Franco, Mining Company of Ireland, East Crowndale, West Wheal Jewel, Bedford United, Camborne Consols, Tin Vale, &c. Shares have also changed hands in Carthew Consols and Wheal Penhale, the reports lately received having considerably enhanced their value, and for which a demand exists at current prices.

The Hibernian Mining Company held their annual meeting on Tuesday last, with doors closed to all but shareholders. From the usual urbanity of the secretary, in matters of general business, we should consider this impolitic step arose from other authority. But we cannot conceive why such secresy should be observed, when the suppression of information has such an injurious effect on the disposal of shares; for mining property is like other stock—its value estimated by public opinion and competition. We do not know the cause for which the company deem it necessary to conceal the state of their affairs; but if the suppression of *private Irish meetings* had been extended to Austinfriars, we should have been prepared to report the proceedings of the company.

The West Wheal Maria Mining Company held their bi-monthly meeting on Thursday last, when they deemed it necessary to suspend operations and abandon the adventure.

The prospectus of the British Smelting Association, appears in our advertising columns to-day. We understand that an influential board of directors will shortly be added, and trust that mining adventurers generally will render every assistance, by co-operation, in establishing an association so important to their interests.

By advices from Valparaiso, to the 31st May, we learn, that some important commercial changes were likely to take place. The Prime Minister of Chili had made a personal visit to the port; and, by a committee of merchants, appointed for the purpose, some considerable reform in the fiscal department was recommended. One of the proposed alterations was, "the reduction, or abolition, of the export duties on bar copper, and upon argentiferous ores, of a nature not amalgamable in Chili."

In foreign mines, several transactions have taken place in Altens, Bolanos, St. John del Rey, Asturians, Copiapo, United Mexicans, and Imperial Brazilians—for the latter, inquiries have been rather numerous at former quotations; but we are not apprised of many sales being effected.

The Asturian Mining Association continues to receive advices from the mines of the satisfactory and progressive advance of their iron-works, as well as their quicksilver. The returns, we understand, are increasing every week, and the iron made is of an excellent quality, and some sales have been effected at a remunerating price. Notwithstanding the heavy expenses to which the company have been hitherto subjected, it is the firm opinion of those deeply interested, that the property will ultimately become one of vast importance and profit.

The National Brazilian Mining Company have received, on the 7th, letters from the mines, dated May 22, which represent the operations at Cocaes as progressing most satisfactorily. The gold produced from the 14th to the 23d May was 8 mcs. 5 oits. 22 grs.

The Copiapo Mining Company received despatches on the 5th, advising up to the 31st of May. The *Cuba*, with 514 tons of copper ore, was to sail on the following day; and another vessel, of 350 tons, was expected to load in a few days. No vessels have arrived for some time past, in consequence of the loss of two chartered vessels on their outward voyage. Taking into consideration the fiscal arrangements in anticipation, both at home and in the country, as well as the depressed standard for copper ores, and being now in full expectation of an improved one, we hope the company will be advantaged by the misfortune. A report of the proceedings at the mines will be found in another column.

The following arrivals of specie have taken place since our last:—The Royal Mail Steam-Packet Company's ship *Dee*, arrived at Southampton on Friday evening, from the West Indies, having on freight, in gold and silver coin, and dollars, &c., on merchants' account, value $503,000; and also 78 lbs. of platina ($364,000) were for the Bank of England. The Peninsular and Oriental Steam Company's ship *Sultan*, arrived at Southampton on Saturday, the 5th inst., from the Mediterranean, having on freight 492 packages of gold and silver coin, to the value of 230,000*l.* sterling, and one box of jewels, value 2000*l.* The Peninsular and Oriental steamer, *Madrid*, arrived on Sunday evening at Southampton, from the Italian ports, having on freight eight boxes of specie. The *Niagara* Royal Mail steam-ship arrived at Liverpool, on Sunday, from New York, having 1500*l.* in specie only on freight.

RAILWAYS.—A very considerable depression took place in prices yesterday—the immediate cause of which is the reduction in the dividends by some of the leading lines, which is producing an influence on opinion considerably beyond the intrinsic value of the difference. The declaration of the dividend, at the meeting of the London and North-Western Company, being reduced to 3½ per cent., or at the rate of 7 per cent. per annum, produced a considerable sensation, and sent the shares down 4 or 5 per cent. The idea that had been for a long period attached to this line—that it would permanently support a dividend of 10 per cent. on the capital invested—has had much more influence than the decrease merits, because it is quite clear that it is, to a considerable extent, caused by the expenditure upon new branches and extensions not yet become productive. The holders in that, and similar undertakings, should, therefore, be cautious, and not throw their property away under the influence of a panic, which there are always parties ready to foster and sustain for sinister purposes.

HULL, THURSDAY.—The share market remains almost without alteration—North British thirds have given way, in consequence of another call. Kingston Cottons have changed hands at 48*l.* dis.; the demand for this stock is rather active, at the low price it at present commands.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	Traffic Returns 1848	1847
Birkenhead, Lancashire, & Chesh.	15	997,284	37	5 *p.c.**	£924	808
Caledonian	130	3,594,470	24½	—	6028	—
Chester and Holyhead	59½	2,871,470	26½	—	—	—
Dublin and Drogheda	35	754,529	23½	—	853	1024
Dublin and Kingstown	7½	473,282	—	6	1109	1423
Dundee, Perth, & Aberdeen Junc.	47	415,073	26	8	1337	1180
East Anglian (Lynn to Ely)	55½	1,062,742	6½	—	620	—
East Lancashire	26	1,733,915	17	—	1353	1258
Eastern Counties and Norfolk	295	9,833,859	14½	4	16110	15478
Eastern Union	51½	979,926	20	—	1335	1177
Edinburgh and Glasgow	53	2,481,767	38	—	4563	4258
Edinburgh and Northern	29	1,392,092	17½	4*	2745	—
Glasgow, Paisley, and Ayr	64½	2,097,321	70	6	2546	3090
Glasgow, Paisley, & Greenock	23	845,554	15	4	1471	1424
Gt. Southern & Western, Ireland	110½	1,809,787	25½	4*	3822	1696
Great Western	281½	10,970,636	84	7	23610	24043
Kendal and Windermere	10½	169,888	23	—	226	229
Lancaster and Carlisle	70	1,395,193	53	4	2549	1600
Lancashire and Yorkshire	136½	7,597,618	86	7	12356	10938
London and North Western	428	21,513,354	120	8	50179	49323
London and Blackwall	4	1,241,061	4½	1½	1255	1502
London, Brighton, & South Coast	161½	6,087,822	29½	4	12590	13501
London and South-Western	189	6,264,164	45	8	11178	11892
Londonderry and Enniskillen	14½	145,185	16	—	154	160
Manchester, Sheffield, & Lincolnsh.	62	2,336,624	60	5	2907	2255
Maryport and Carlisle	28	440,851	40	—	636	760
Midland Company	422½	9,853,122	99	7	25128	22603
Midland Great Western (Irish)	36½	725,332	10½	4*	912	1002
Newcastle and Carlisle	66½	1,407,375	109	6	—	667
North British	81	2,800,748	21½	5	3072	2806
Scottish Central	33	——	22½	—	1168	—
Shrewsbury and Chester	17	780,272	14	—	780	509
South Devon	50½	1,609,071	18	—	1894	1172
South-Eastern	165½	6,932,181	24	6½	11227	11663
Taff Vale	38	820,056	125	5½	1763	1560
Ulster	36	684,684	45½	4½	—	755
Whitehaven Junction	12	147,095	7	4½	198	272
York, Newcastle, & Berwick	242½	4,466,526	30½	9	13607	11386
York and North Midland	230½	3,799,297	65	10	9978	8731

* Interest.—Total for last week, £231,828, being an increase of £19,913 over last year.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7	—
512	Albert Consols	1	2½
1024	Alfred Consols	4½	5
235	Andrew and Nangiles	28½	5
1000	Antimony and Silver-Lead Mining & Smelting	5	6-½
1024	Ashburton United Mines	7½	10
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	6	6½
1000	Barristown	4½	1
4000	Bedford	2½	2
1244	Birch Tor Tin Mine	9½	1½
8000	Blaenavon	50	17½
100	Botallack	175	60
120	Brewer	5	7
10000	British Iron, New, regis.	10	13
—	Ditto ditto, scrip	10	10
128	Budnick Consols	52½	35
128	Callestock	17	30
1000	Callington	19	20
1000	Camborne Consols	5	6
20000	Cameron's Steam Coal	6	1
256	Caradon Copper Mine	9½	2
256	Caradon Mines	22½	10
256	Caradon United	24	5
256	Caradon Wh. Hooper	21	10
1000	Carn Brea	15	92½
3000	Carthew Consols	1½	5
2048	Cascade	1	2
112	Charlestown	220	60
512	Coatlithe Hill	½	1
500	Comblawn	5½	6
128	Comfort	45	50
256	Condurrow	20	26
2560	Cook's Kitchen	14	2
1000	Coombe Valley Quarry	3	4
6500	Cornish Mining Co.	2	2½-½
1000	Copper Bottom	1½	6½
1024	Cosheen	4½	20
225	Craddock Moor	16½	5
128	Creeg Braws	120	100
500	Cubert Mine	12½	10
1000	Cwm Erfin	3½	3½
300	D. Prior & Buckfastleigh	14	26
7100	Derwent	8½	5
845	Devon & Courtenay Con.	7½	1½
1024	Devon Great Consols	1	210
1000	Dhurode	2	5
186	Dolcoath	30	15
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
3000	Dyfngwm	10	12½
512	East Alvenney	5½	12½
112	East Caradon	47	47
2048	East Crowndale	5½	2½-3
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	7
100	East Relistian	22	40
9000	East Tamar Consols	½	¼
—	East Wheal Albert	1	3
94	East Wheal Crofty	125	280
1024	East Wheal Fortune	2	3
1024	East Wheal Friendship	3	3½
128	East Wheal Rose	50	800
—	East of Scotland Iron Co.	2½	1½
128	East Wheal Seton	14	10
256	Elborough	1½	2
256	Exmoor Wh. Eliza	4	6
512	Fowey Consols	40	45
6400	Gadair	2	2
20000	Galvanised Iron Co.	10	5
4000	Gen. Mining Co. for Irel.	1½	1½
2048	Georgia Tin Mines	1½	1½
2048	Goldscope Mine	2	2
256	Gonamena	34	8
128	Goonvrea	4	1½
100	Great Consols	1000	400
2560	Great Michell Consols	1½	3
256	Great Resugga Moor	11	6
512	Gt. Wh. Rough Tor Con.	17½	20
100	Grogwinion	5	—
256	Gwinear Consols	7	3
6000	Heignston Down, Con.	½	2½
256	Herodsfoot	18	28½
10000	Hibernian	12½	1½
239	Hobb's Hill	6	3
1000	Holmbush	19	4
827	Kirkcudbrightshire	5½	2
2048	Lamherooe Wh. Maria	11	4
128	Lelant Consols	90	60
160	Levant	—	120
1000	Lewis	15	6½
1000	Llwyn Malees	5	—
3600	Llynvi Iron	50	50
256	Lostwithiel Consols	15	15
6000	Marke Valley	10	2
5000	Mendip Hills	2½	⅝
5000	Merionethshire Slate & Slate Slab Co.	1½	2
128	Metha	34	133
20000	Mining Co. of Ireland	7	4
256	New East Crowndale	3½	2½
128	North Fowey Consols	37	10
100	North Pool	45	350
140	North Roskear	5½	155
256	North Wh. Abraham	1	1
262	North Wh. Leisure	1½	2
15000	Northern Coal Co.	23	2
128	Par Consols	—	1000
4000	Pennant	1½	1
100	Penrhiw	30	65
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	10
512	Plymouth Wh. Yeoland	6½	20
256	Polsaith Consols	4½	7
10000	Rhymney Iron	50	13
10000	Ditto New	7	6½
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
3072	South Callington Mine	2	½
128	South Caradon	10	400

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
1100	South Dolcoath	4	4
256	Sth. Friendsh. Wh. Ann	20	4
200	South Harvannah	10	25
256	South Molton	5	8
256	South Toigus	10	30
256	South Trelawny	20	12
128	South Wheal Basset	110	110
256	South Wh. Betsey	2½	12½
124	South Wh. Frances	160	200
1000	South Wh. Maria	2½	1½
10000	Southern & Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
999	St. Minver Consols	1	6
1000	Stray Park	43	15
9600	Tamar Consols	3	5½
1024	Tavy Consols	4	8
6000	Tincroft	7	5½
1000	Tin Vale	2½	3½
128	Tokenbury	152½	10
256	Tollpetherwin	3½	5
256	Tregordan	1	7
256	Trehane	2½	26
5000	Treleigh Consols	6	2½
2000	Trenance	3	18
96	Tresavean	10	210
120	Trethellan	5	12½
120	Treviskey and Barrier	130	90
288	Trevean	1½	5
100	United Mines	300	350
256	Wellington Mines	15	10
128	West Basset	45	10
256	West Caradon	20	100
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Providence	9	12
200	West Seton	40	160
—	West of Scotland Iron Co.	210	210
120	West Trethellan	5	30
256	West United Hills	—	4
512	West Wheal Frances	1½	2
256	West Wh. Friendship	9	8
3725	West Wheal Jewel	11	1½
2560	West Wh. Maria	3	1
256	West Wheal Toigus	21½	7
256	West Wheal Treasury	19	8
5200	Wicklow Copper	5	10½
184	Wheal Adams	51	10
1000	Wheal Agar	—	8
256	Wheal Albert	10	1
256	Wheal Allen	2	5
240	Wheal Anderton	23	23
128	Wheal Ann	—	50½
512	Wheal Anna Maria	6½	8
1024	Wheal Ash	4½	8
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	4-5
256	Wheal Benny	12½	7
256	Wheal Bleucowe	21	5
256	Wheal Bucketts	20	5
256	Wheal Calstock	5	10
136	Wheal Clifford	190	50
1024	Wheal Coad	½	5
268	Wheal Courtenay	12½	15
6000	Wheal Curtis	3	½
256	Wheal Fortescue	6½	5
388	Wheal Franco	27	15
128	Wheal Harriet	45	50
256	Wheal Jane	21	15
1024	Wheal Lawrence	2½	6
256	Wheal Louisa	8½	8
112	Wheal Margaret	79	250
512	Wheal Mary Ann	5	12½
237	Wheal Mary Consols	42½	5
—	Wheal Penhale	—	12
240	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	15
99	Wheal Seton	214	700
194	Wheal Sisters	32½	12
512	Wheal Sophia	3[illegible]	5
128	Wheal Spearne	10	75
128	Wheal St. Ann	9	15
550	Wheal Trescoll	2	10
260	Wheal Trelawny	7½	60
256	Wh. Tremaine (St. Ervan)	4½	1½
1024	Wheal Tremayne	35	1½
92	Wheal Tryphena	140	265
242	Wheal Venland	29½	30
256	Wheal Vlow (Perranz.)	½	½
184	Wheal Vyvyan	—	60
250	Wheal Williams	28½	8
1024	Whiddon Mines	4½	4½
	FOREIGN MINES.		
5000	Alten Mining Company	14½	2½
15000	Asturian Mining Co.	13	2½
20000	Australian	2	2
10000	Anglo-Mexican Co.	100	¼
12374	Ditto Subscription	25	2½
6000	Barossa Range	½	1½
3000	Bolanos	150	3
2000	Ditto Scrip	15	3
12000	Brazilian Imperial	23	4
10000	Cobre Copper Co.	40	15
10000	Copiapo Mining Co.	14	2
10000	General Mining Ass'n.	20	11½-12
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
2000	Mexican & South Amer.	8	½
5000	Mocaubas & Cocaes	30	6
100000	N. Brit. Australasian	1	½
29320	Rl. del Monte, regis. / Ditto unregistered	28½	½-⅝
	Ditto Red Debentures	—	4
	Ditto Black ditto	—	3
	Ditto Loan Notes	150	26
7000	Royal Santiago	10	5
11000	St. John del Rey	15	7½
43174	United Mexican	Av. 28½	3½

LATEST CURRENT PRICES OF METALS.

LONDON, AUGUST 11, 1848.

	£	s.	£	s.	d.		£	s.	£	s.	d.
IRON—Bar *a*..Wales..*ton*	5	15—	6	0	0	COPPER—Ord. bottoms	0	0—	0	0	10
,, ..London	0	0—	6	15	0	YELLOW METAL SHEATHING	0	0—	0	0	7½
Nail rods ,,	0	0—	7	15	0	TIN—Com. blocks *g*..*cwt.*	0	0—	3	15	0
Hoop (Staf.) ,,	8	12 6	8	15	0	,, bars	0	0—	3	16	0
Sheet ,, ,,	9	10—	9	15	0	Refined	0	0—	3	19	0
Bars ,, ,,	0	0—	8	10	0	Straits *h*	0	0—	3	14	0
Welsh cold-blast foundry pig	3	10—	4	5	0	Banca	0	0—	4	0	0
Scotch pig *b*, Clyde	0	0—	2	6	0	TIN-PLATES—Ch., IC *i*, *box*	1	8—	1	10	0
Rails, average	0	0—	6	0	0	,, IX	1	14—	1	16	0
Chairs	0	0—	4	0	0	Coke, IC	1	5 6	1	6	0
Russian, CCND *c*	0	0—	17	0	0	,, IX	1	11 6	1	12	0
,, PSI	0	0—	——			LEAD—Sheet *k*..*ton*	0	0—	17	0	0
,, Gourieff	0	0—	——			Pig, refined	0	0—	18	0	0
,, Archangel	0	0—	13	0	0	,, common	16	0—	16	10	0
Swedish *d*, on the spot	11	5—	11	10	0	,, Spanish, in bd.	0	0—	16	10	0
,, Steel, fagt.	0	0—	15	0	0	Red	0	0—	18	10	0
,, ,, kegs *e*	0	0—	13	10	0	Dry White	0	0—	23	0	0
COPPER—Tile *f*	0	0—	78	10	0	Shot (Patent)	0	0—	19	10	0
Tough cake	0	0—	79	10	0	SPELTER—(Cake) *l* on spot	15	0—	15	10	0
Best selected	0	0..	82	10	0	,, for arrival	0	0—	—		
Ordin. sheets, *lb.*	0	0—	0	0	9	ZINC—(Sheet) *m* export.	21	0—	22	0	0
						QUICKSILVER *n*..*lb.*	0	0—	0	3	6

REMARKS.—The prices of all metals remain as quoted last week, except spelter, which has advanced about 10s. per ton, in consequence of the expected blockade of the Elbe, &c. The Dutch East India Company have given notice of offering for sale at Rotterdam, on 29th inst., 85,000 slabs (about 2600 tons) of banca tin—viz.: 40,000 there, and 45,000 at Amsterdam, in lots of 1000 slabs each, with an undertaking to make no further sale either in Holland or at Java till August, 1849.

DUDLEY, AUGUST 11.—The differences between the ironmasters and the men, on the subject of wages, are, I am happy to announce, in course of satisfactory adjustment. A the preliminary meeting of the ironmasters, at Stewponey, whereat the reduction of price was resolved upon, it was deemed essential that the wages of the men should be reduced 2½ per cent. This was acceded to by a number of the men in one district; whilst in another a large proportion of them stood out against it. Matters are now, however, in such a state, that existing differences will, most likely, be soon at an end. In the important district, south of this town, it has been arranged, that the men's wages shall be reduced only 8 per cent., in consequence of the improved state of the trade—the ironmasters not caring to take more orders at the present prices. At the collieries, the price of coal to the iron-works alone has been reduced 1s. per ton, and slack 6d.

GLASGOW PIG-IRON TRADE, AUGUST 10.—There has been a great want of activity in our pig-iron market this week—little inclination shown either to buy or make sales. The price seemed a shade easier to-day, and we quote the price of mixed Nos. at 44s. 6d to 45s.—cash.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—Gold coin to Rotterdam, 1100 ounces; ditto to Harlingen, 216; ditto to Swan River, 147; ditto to Amsterdam, 108; ditto to Calais, 150—Silver coin to Rotterdam, 200,500 ounces; ditto to Hamburgh, 15,000; ditto to Belgium, 2000; ditto to Rotterdam, 247,400; ditto to Hamburgh, 57,400.

NEW PATENTS.

D. Mackenzie, Goodman's-fields, manufacturer, for certain improvements in Jacquard machinery for figuring fabrics and tissues generally, and apparatus for transmission of designs to said Jacquard machinery, parts of which are applicable to playing musical instruments, composing printing types, and other like purposes. (Being a com.)

D. Newton, Macclesfield, Chester, merchant, for certain improvements in the application of glass and glazed surfaces to nautical, architectural, and other similar purposes.

S. Thornton, Birmingham, merchant, and J. E. M'Connell, Wolverton, Buckinghamshire, engineer, for improvements in steam-engines, and in the means of retarding engines and carriages on railways, and in connecting railway carriages or waggons together; also improvements in effecting a communication between one part of a railway train and another, by signals or otherwise.

J. Metcalf, Little Bolton, Lancaster, machine maker, and R. Halliwell, of the same place, mechanic, for certain machinery or apparatus for preparing and spinning cotton and other fibrous substances.

M. Poole, London, gentleman, for improvements in the manufacture of casks and other similar vessels of wood. (Being a communication.)

S. Lees, of the firm of H. Lees and Sons, Park Bridge, Lancaster, iron manufacturer, for certain improvements in the manufacture of malleable iron.

J. Cooch, Harleston, Northamptonshire, agricultural implement maker, for improvements in sackholders.

W. T. Henley, Clerkenwell, philosophical instrument maker, and D. G. Foster, Clerkenwell, aforesaid, metal merchant, for certain improvements in telegraphic communication, and in apparatus connected therewith, parts of which improvements are also applicable to the moving of other machines and machinery.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

T. B. Clark, Lawrence Poutney-lane, London, a direction label.

J. Brown, Sheffield, conical spring for railway carriages made of round, square, oval, hexagon, or octagon steel.

J. R. Grover, Castle-street, Holborn, letter paper.

C. Twigg, Birmingham, a sewn-through shank papier maché button.

Robinson and Fussell, Mill-Wall Works, Poplar, wrought-iron railway wheels.

T. Porter, Strand, shirts.—*Mechanics' Magazine.*

LEAD ORES.

Sold at the Mine.

Mines.	*Tons.*	*Price.*	*Purchasers.*
East Wheal Rose	87	£10 1 0	Newton, Keates, & Co.
ditto	85	10 4 0	ditto
ditto	70	9 15 0	ditto
Total tons	242.		

Sold at Aberystwith.

Llwynmalees	16 8 c.	£10 1 0	Mather & Co.

BLACK TIN.

Sold at Mellanear Smelting House, St. Erth, August 9, 1848.

Mine.	*Tons c. qr. lbs.*	*Price.*	*Amount.*
Wheal Tremayne	12 2 3 9	£40 15 0	£494 15 3
ditto	1 11 2 17	34 0 0	53 16 1
Carriage of ditto		0 10 0	6 17 2
Total amount		£555 8s. 6d.	

Mine.	*Tons c. qr. lbs.*	*Price.*	*Purchasers.*
Ashburton United	4 17 0 24	£42 0 0	Bolitho & Sons.

COPPER ORES.

Sampled July 26, and Sold at Andrew's Hotel, Redruth, Aug. 10, 1848.

Mines.	*Tons.*	*Price.*	*Mines.*	*Tons.*	*Price.*
Carn Brea	125	£3 13 0	Par Consols	68	£5 18 6
ditto	96	7 5 6	ditto	64	7 5 0
ditto	87	3 15 0	Wh. Agar	70	3 4 6
ditto	85	7 3 6	Wh. Tremayne	42	4 8 6
ditto	82	3 11 6	ditto	25	1 12 6
ditto	73	7 8 0	Wellington Mines	27	8 9 0
ditto	69	2 17 6	ditto	13	3 17 0
ditto	58	4 4 6	Hayle Slag	40	1 4 0
ditto	54	3 6 0	Wh. Jane	35	3 1 0
ditto	41	7 6 6	Wh. Pleasant	11	2 8 0
Par Consols	104	5 17 6	Gwinear Consols	10	7 4 0
ditto	76	6 1 0			

TOTAL PRODUCE.

Carn Brea	770	£3846 1 6	Hayle Slag	40	£48 0 0
Par Consols	312	1937 14 0	Wh. Jane	35	106 15 0
Wh. Agar	70	225 15 0	Wh. Pleasant	11	26 8 0
Wh. Tremayne	67	226 9 6	Gwinear Consols	10	72 0 0
Wellington Mines	40	278 4 0			

Average Standard .... £ 80 10 0 | Average Produce 9½
Average Price per ton £5 0 0
Quantity of Ore .... 1355 tons. | Quantity of Fine Copper, 130 tons 7 cwts.
Amount of Money £6767 7 0
LAST SALE.—Average Standard .... £ 88 11 0.—Average Produce 7½

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	224½	£1471 8 0
Vivian and Sons	464½	2088 11 9
Freeman and Co.	124½	479 18 3
P. Grenfell and Sons	46	133 3 0
Crown Copper Company	6½	25 0 6
Sims, Willyams, and Co.	170½	606 11 0
Williams, Foster, and Co	318½	1962 14 6
Total tons	1355	£6767 7 0

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Devon Great Consols, Wheal Josiah, Wheal Maria, Wheal Fanny, and Wheal Anna Maria, 1021—West Caradon 267—Fowey Consols 228—Wheal Friendship 217—Marke Valley 182—Bedford United Mines 102—Treviskey 58—Wheal Pink 57—Holmbush 54—Phœnix 36.—Total quantity of ores to be sold, 2222 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—United Mines 1161—Par Consols 357—South Caradon 222—Wheal Comfort 206—Tresavean 144—West Wheal Jewel 73—West Trethellan 41—Wheal Brewer 28—Wheal Agar (by Caradon) 20—East Downs 8.—Total quantity to be sold, 2260 tons.

COPPER ORES

At SWANSEA, for sale August 17.—Cobre 126, ditto 88, ditto 81, ditto 77, ditto 70, ditto 66, ditto 44, ditto 149, ditto 89, ditto 86, ditto 75, ditto 73, ditto 71.—Cuba 132, ditto 125, ditto 68, ditto 10, ditto 78, ditto 67, ditto 48.—Berehaven 112, ditto 104, ditto 97, ditto 91, ditto 87.—Chili 48, ditto 47, ditto 46, ditto 55, ditto 42, ditto 41.—Burra Burra 80, ditto 51, ditto 50, ditto 40, ditto 35, ditto 25, ditto 18, ditto 67, ditto 58, ditto 51, ditto 50.—Knockmahon 106, ditto 59.—Kanmantoo 60, ditto 57, ditto 16, ditto 5, ditto 2, ditto 1.—Ballymurtagh 50, ditto 47.—Lackamore 24, ditto 6.—Cronebane 1.—Tigrony 1.—Total quantity of ore to be sold, 3353 tons.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 13 9—Buddle's West Hartley 14—Carr's Hartley 14 3—Chester Main 15—Davison's West Hartley 14 3—Hasting's Hartley 14 3—Holywell Main 14 6—New Tanfield 13—Ord's Redheugh 12 6—South Peareth 12—Tanfield Moor 14—Townley 13 6—Wall's End Acorn Close 15 6—Bell and Brown 15 9—Clarke and Co. 13 6—Framwellgate 15 6—Gosforth 15 9—Hedley 15 9—Heaton 15 9—Harton 15 9—Hilda 15 6—Killingworth 15 9—Walker 15 6—Washington 15 3—Eden Main 16 3—Lambton Primrose 16 3—Belmont 16 6—Braddyll's Hetton 17—Haswell 17 6—Hetton 17 3—Keepier 17—Lambton 17—Morrison 15 9—Murton 17—Russell's Hetton 17—Shotton 16 3—Stewart's 17 3—Whitwell 16 3—Caradoc 16 9—Cassop 16 6—Hudson's Hartlepool 16—Heugh Hall 16—Thornley 16—Adelaide Tees 16 6—Seymour Tees 16—South Durham 16—Tees 17—West Cornforth 15 6—West Hetton 16—Derwentwater Hartley 14—West Hartley Netherton 14 3—Sidney's Hartley 14 3.—Ships at market, 132; sold, 112.

WEDNESDAY.—Buddle's West Hartley 14—Chester Main 15—Davison's West Hartley 14 3—Holywell Main 14 6—New Tanfield 12 9—Ord's Redheugh 12 6—Percy Bensham 15 3—Tanfield Moor 14—Townley 13 6—Wall's End Elm Park 15 9—Framwellgate 16—Gosforth 15 9—Hedley 15 9—Killingworth 15 9—Riddell's 15 6—Washington 15 3—Eden Main 16 3—Lambton Primrose 16 3—Belmont 16 6—Haswell 17 6—Hetton 17 3—Jonasshon 15 3—Lambton 17—Russell's Hetton 17—Stewart's 17 3—Whitwell 15 6—Caradoc 16 9—Hartlepool 17 3—Heugh Hall 16—South Hartlepool 16 6—Seymour Tees 16—South Durham 15 9—West Cornforth 15 6—Howard's West Hartley Netherton 14 3—Hartley 14—Bell 16 6.—Ships at market, 70; sold, 52.

FRIDAY.—Buddle's West Hartley 14 3—Carr's Hartley 14 3—Chester Main 15—Davison's West Hartley 14 3—Dean's Primrose 13—Adair's Main 12—Hasting's Hartley 14 3—Original Tanfield 11 9—Ord's Redheugh 12 6—Pontop Windsor 12 6—South Peareth 12—Tanfield Moor Butes 12 6—Townley 13 6—Wall's End Clarke and Co. 14—Elm Park 16—Gibson 15 6—Gosforth 15 9—Hedley 15 9—Harton 15 6—Hotspur 15—Killingworth 15 9—Riddell's 15 6—Walker 15 6—Wharncliffe 15 9—Washington 15 3—Eden Main 16 6—Belmont 16 6—Braddyll's Hetton 17 3—Bell 16 6—Haswell 17 6—Hetton 17 3—Lambton 17—Lumley 16—Russell's Hetton 17—Shotton 16 6—Stewart's 17 3—Whitwell 16—Caradoc 17—Cassop 16 9—Hudson's Hartlepool 16—Heugh Hall 16—Kelloe 16 9—Adelaide Tees 16 6—Richardson's Tees 15—Seymour Tees 16—South Durham 15 9—Tees 17—West Tees 15 3—Cowpen Hartley 14 6—Derwentwater Hartley 14—West Hartley Netherton 14 3.—Ships at market, 133; sold, 107.

CONTRACT FOR COAL TO INDIA.—The Court of Directors of the East India Company have given notice, that the Finance and Home Committee will be ready, on or before Wednesday next, the 16th inst., in the forenoon, to receive sealed tenders from such persons as may be willing to supply the company with 3000 tons of coals of either of the under-mentioned sorts, to be delivered at Aden, on the southern coast of Arabia—viz.: West Hartley coal, Carr's Hartley, Buddle's ditto, Davison's West Hartley, Stewart's Wall's End steam coal, Hartlepool, West Hartley, Glasgow hard splint coal (screened), and Risca black vein coal (hand-picked). The progress of steam navigation in the Mediterranean, the Red Sea, and the Indian Archipelago, within the last few years, and to our West Indian colonies, has opened a wide field to our collieries for exportation, and also the necessary demands of the steam-vessels of her Majesty's navy. When railways are generally established throughout the eastern and western hemispheres, this demand for carbonic or bituminous fuel will be greatly increased, as also that for iron, and machinery of every description.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Aug. 5, was 17,059; amount of money, £71 1s. 7d.

Rainton Colliery.—T. Hall, while working at the Meadows Pit, was passing upon a waggon, which conveys the tubs up an inclined plane to the top of the pit head, fell, and alighted upon the sole-end of a waggon standing below, by which his head was so severely bruised, that he died almost immediately.

NOTICES TO CORRESPONDENTS.

⁂ We should feel obliged to all pursers, captains, or adventurers, to forward particulars of meetings, &c., of the mines with which they may be connected, on the earliest opportunity, that they may be published in the Journal with as little delay as possible.

Erratum.—In our notice of Mr. Buckle's paper, on a Machine for Grinding Bones for Manure—read at the recent meeting of Mechanical Engineers—the quantity said to have been ground in 10 hours should have been 136 bushels.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, AUGUST 12, 1848.

It is but a very short time since that we apprised our readers of the probability of an early revival of business in the iron districts; and, about the same time, we addressed a short article to the workmen especially, pointing out the reasonableness of their suffering, with the masters, patiently the pressure of the times, and the infinitely greater advantages of submitting to the course which events were taking, than of meeting it in a temper of dissatisfaction and resistance. It gives us great pleasure to learn, by communications from the immediate districts, that the improvements which were foreseen, are actually commenced—that orders have come in with such freedom, as to make trade cheerful and active; and, although prices under the arrangement, peculiar to this trade, cannot be raised immediately, there is a near prospect of better wages to the men, and of fairer profits to the masters.

From the same sources we are also very happy to learn, that between the two classes just mentioned a good understanding everywhere prevails. The men have seen the propriety of a peaceful and orderly conduct, and that the temporary lowering of the wages of their labour was what arose necessarily out of the great and general depression of business. They may now look forward very confidently, we trust, to an early advance of wages—for, if we know anything of the ironmasters as a body, nothing will give them greater satisfaction than raising and enlarging the material comforts of their workmen, when the prices ruling the market will, by any means, allow them to do so. How happier, wiser, and more beneficial are such results as these, than that tumultuous precipitation of the several classes against each other, by which, in so many instances, capital has been dispersed, and occupation itself become a stranger to the 10,000 throngs who waited for and wooed her approach.

In a late Number, we gave at length a copy of the petition to the House of Lords, on the subject of the reduction, or rather, we might say, the remission of the duty imposed on the importation of foreign ores, and have since received copies of petitions to the House of Commons, now in course of signature, and which will be presented on an early day, so that the same may, at least, be rendered, in some degree, effective in committee, as but little hope was entertained that they would be successful in causing the bill to be thrown out on the second reading, supported, as it is, by the shareholders in foreign mines, the smelters, and the Ministerial phalanx. From the nature of the petitions presented, and the language in which they are couched, it would appear, that all interested in mines—not only as lords and adventurers, engineers, merchants, carriers, or the shipping community, but more especially the working miner, should lend a helping hand, and by one united effort prevent the destruction of our home mining interest, which, it is assumed, must, in a great measure, be the result of the proposed Ministerial measure, if carried—the effect necessarily being that of affording increased advantages to the foreign miner, and to the smelter, at the cost and ruin of the industrial mining classes of the United Kingdom.

In directing attention to this important subject, with a due regard to our home mines, we are not insensible to the vast capital expended in Brazil, Chili, Cuba, Mexico, and other districts. It is not the capital embarked that we are alone to look at, but it is, in addition thereto, the monthly expenditure in working the mines, all which, or at least, the greater portion, is spent abroad, and, comparatively, not a penny expended in promoting or encouraging the mining interests of this country, save the salaries paid to English agents, and some few pitmen, or working miners. We know full well, that assuming the mines even to pay cost, or yield a slight profit, yet, with a current expenditure of $10,000 or $20,000 monthly, that the produce arising from such outlay comes not into the pockets of the shareholders, but returns to the mines, to afford them the means of paying the next monthly cost, or current expenditure.

Let us not, however, run away from the object in view—that of the policy or otherwise of the proposed measure; and, while our columns are ever open to the opinions of all parties on a subject so important as the present, we cannot disguise from ourselves, that the injury likely to be inflicted on our home mines should the proposed measure become a law, is such as can only be viewed with alarm by all interested in the working of mines, or who have a regard for the welfare and means of support to be afforded to the working miner. From figures before us, it appears that, during the past five years, no less than 252,202 tons of foreign ores have been imported—that is, so far as can be collected from sales at ticketing, but it is notorious that large quantities are imported direct to the smelter at Swansea, or consigned to Liverpool. It is, therefore, most important that, in viewing the question, the association of the smelter with the foreign miner should be considered as blended in opposition to the home mine adventurer, for that the interests of the latter, as well as of the home miner, are sacrificed to the advantages to be acquired by the foreign mine adventurer, in importing his ores to this country, and that now proposed to be on increased beneficial terms, we think must be generally admitted. We have before us the results of the public sales of British and foreign ores, for the years 1846 and 1847; from which we find, that the quantity of Cornish ores raised in that time was 306,457 tons, of an average produce of 8, yielding 24,575 tons 2 cwts. of pure copper, which, taken at the average price of 92*l.* per ton, would give 2,313,402*l.* 8s.; while the ores produced only 1,685,533*l.* 7s.—thus leaving on those two years a surplus of 627,869*l.* 1s., which was in favour of the smelters. From this amount we must, of course, deduct—say, 13*l.* 10s. per ton, for charges of smelting, which would be on 24,575 tons 2 cwts. of copper, 331,763*l.* 17s., which would give a surplus profit in favour of the smelter, after deducting all costs, of 296,105*l.* 4s., on Cornish ores alone.

If we turn to the foreign imports, we shall find that, in the same period, the sales, through the same channels, amounted to 96,258 tons, yielding 24,064 tons of pure copper—the average produce of the ores being 25 per cent. The amount realised by the sales of ore was 1,223,968*l.* 19s. 6d.; while the price realised as pure copper by the smelter was 2,213,888*l.*, leaving a surplus of 989,919*l.* 0s. 6d., from which deduct, as in the former instance, 13*l.* 10s. for smelting charges, or 324,864*l.*—giving a net profit of 665,055*l.* 0s. 6d. to the smelters—thus making the gross profit, for the two years, no less than 961,160*l.* 4s. 6d., such sum being divided between five or six houses, of which two may be said to take the lion's share.

Let us next see what have been the results of the past six months, as regards the Cornish and foreign mines, which, with the other data, will be found to have been reported in our columns. The results of the past six months show the returns of Cornish mines to be 75,442 tons, with an average of 8¼ produce, yielding 6254 tons 6 cwts. of pure copper—the amount received for the ore by the miner being 379,848*l.* 6s.; while that realised by the smelter was 563,832*l.*, less the assumed cost of reduction, which, at 13*l.* 10s. per ton, would amount to 84,433*l.*—thus showing a net return of 99,551*l.* Again, to take the foreign ores, we find that the quantity entered and sold was 20,258 tons, which, if again taken at 25 per cent., would produce 5064 tons of metallic copper—the amount produced on the sale of ores being 232,956*l.* 12s.; while the value of pure copper is set down at 465,888*l.*, which, after deducting the assumed cost of smelting—say, 68,363*l.*—would leave a net profit to the smelter, over and above cost of ores and smelting charges, save interest on capital, no less a sum than 164,568*l.* 8s.—thus giving, for the past six months, with a reduced price of metallic copper, a net income to the smelters of upwards of 320,000*l.* per annum. We are well aware, that these figures will, and doubtless can, be met, on the part of the smelters, by certain sets off; but we defy them to disprove the assertion we boldly put forward, that they are reaping excessive gains at the cost of the adventurers and the miner; and hence the necessity of the establishment of a smelting company, or the amalgamation of the mining interests, to put down monopoly, and to uphold fair and legitimate prices, so as to be remunerative to the hard-working miner, and to yield a return to the capitalist for his investment. In following out the statistics before us, we may observe that, while on the 30th of March the produce is 7⅞, and the price of pure copper 92*l.* per ton, the price of the ore was 4*l.* 13s. 6d., with a standard of 100*l.* 11s. Comparing this with the sale of the 25th of May, we find, while the produce of the ores, and price of metal, is the same as at the date previously cited, the price of the ore is only 3*l.* 19s. per ton—thus making a difference of 14s. 6d. per ton; or, on the aggregate sale of 4562 tons, a reduction in value of upwards of 3300*l.*, or at the rate of 165,000*l.* per annum. The quantity of ores imported in the past five years, from the returns presented, show an aggregate of 262,585 tons, which, if we take them at 25 per cent. produce, including regulus, would give us 65,646 tons of pure copper.

To revert to the petitions about being presented to the House of Commons, and now in course of signature, it may be sufficient to observe that, in substance, they are alike to that which appeared in a late Number of the Journal, addressed to the Upper House. It will be remembered, that Mr. Wylde, the hon. Member for Bodmin, moved for certain returns, having reference to foreign ores imported, with the view of directing the notice of the House to certain points connected with the proposed measure; and, we were given to understand, that the Copper Duties Bill would have come under consideration on Thursday, the 3d inst., and again on the 10th, but have good reason to believe that the matter will be shelved for the present session. In the mean time, it is to be hoped that there will be no endeavour to smuggle the bill through the House, or committee, without the Members for the county having the opportunity of at least drawing attention to its objects, and the injury it is calculated to inflict on our home mines.

It is a long time since a proposition has turned up more seasonable as to its date, or promising more fully to realise the expectations of its promoters, than that now before the public for the further colonisation of New Brunswick, and some of the southern districts of Canada. A further recommendation of the project is, that it is primarily suggested, and will be carried out by the funds supplied, for the most part, by the working classes, and to be applied under the superintendence of a committee of themselves. In addition to the colonial part of the undertaking, it is purposed to construct a railway, in such a direction through the lands colonised, as that it may become an accessible and economical highway, to take off, with all expedient regularity and dispatch, the industrial produce of the new colonists—agricultural, mining, and miscellaneous. Objections are, with some plausibility, raised as to this double undertaking, as likely to embarrass the mind and overtask the means of the committee; but it is not necessary that the expected funds of the association should be in any danger of being exhausted by the two branches of expenditure. It is purposed to raise 2,000,000*l.* sterling, for the purposes taken as a whole of the new settlements. In the districts which it is purposed to occupy, railway construction, in consequence of the lower value of land and labour, and the presence of almost all the requisite materials, the expense of this description of work bears no proportion to what it would amount to in almost any other country in which the creation of such an extensive line of transit would be for a moment thought of. It does seem to us desirable, that the unwooding and the sowing of the lands, and the erection of a great highway for the transmission of their produce, should go on *pari passu* and hand-in-hand. It would, in that case, be an area, giving occupation to railway artisans and labourers, as well as to those whose special business it is to plough, to sow, and to reap. The working public will be satisfied to know, that so tried, so sincere, and so discriminating a friend as Lord Ashley, is a prominent patron of this new enterprise. But on its merits alone the undertaking deserves, as we think, the attention of Government, and the assistance of those interested in relieving the labour market of the United Kingdom, in whatever direction, and by whatever arrangement of efforts, that relief can be realised.

There can be few tasks much easier than that of sitting down in the retirement of a snug library, and delving into half a score volumes of left-handed reports, and half the number of oblique documents, and out of them elaborating a colourable charge against the imperial administration of the colonies of Great Britain. A notable instance of this discreditable facility was afforded by the House of Commons some few nights since, when a gentleman of great abilities, no doubt, but of greater inexperience, and as green to the duties and the difficulties of public business as man well can be, arraigned the conduct of the colonial office—not in this or in that particular branch of its labours—not in that continent stretching through the temperate zone, nor in those islands sparkling in the torrid—not in this generation more particularly than in that preceding it—not by one class of statesmen more than by another, but by all Governments, and by every administration, at all times, and wherever, in either hemisphere, we have set up the ensigns of our authority. The enormous breadth of this imputation, the extreme latitude of the indictment, deprives it of all specific force, and takes out of it all individual application. It is one of those vague generalities which falls on no human shoulders in particular, and fixes itself upon no cabinet, nor any score of cabinets, past or present, as a matter of just complaint, or of plausible incrimination. There are two facts connected with the colonial empire of this country, which, under the circumstances of this charge, are very beneficially significant. In the first place, the colonies of England are very extensive; and secondly, as a rule, they are very prosperous—step by step our acquisition of territory was one of the consequences of a just and paternal administration of that which had been previously acquired. Every one conversant with the growth of our possessions, is quite aware, that the *prestige* of our Government was scarcely less efficient than the force of our arms, in making us masters of the lands for which we contended; and, having won them, the peace, the commerce, the civilisation, and the happiness of the people flowed on as a river—fertilising and refreshing whatever, in the existing elements of society, had, till that time, continued dry and unproductive. Commerce and the arts, we repeat it, has already been imparted to them, and we wait to bestow, when they are competent to receive, the full benefit of our civil institutions, our literature, and our civilisation. In the face of these benefits, so largely inherited, and of others, which wait only the inheritable condition in those who are to receive them, Sir W. Molesworth tells the House of Commons and the world, that the government of your immense colonies is an immense failure. This is one of the consequences of having amongst us such a multitude of amateur statesmen—such a crowd of political *dilettanti*, who put themselves, in another sense, in the case of that martinet, who could criticise all the campaigns since those of Cæsar, yet had himself never set a squadron in the field, nor of the division of a battle knew more than a spinster. It is impossible, that either in or out of Parliament, much countenance can be given to pretensions so unsanctioned and unsupported as these. It is impossible also to give any very favourable account of the double proposition proceeding from the same amateur school—namely: that upon all the colonies of England, great and small, we should bestow the British constitution in miniature; and, secondly, that we should leave them to their own means of government and defence. Highly as we think of that constitution as a system of polity for the people of these realms, who have grown up beneath the shadow of that glorious tree, and eaten, from the childhood of our public history, of its fruits, we may yet doubt its adaptation to all the phases of society, within the circle of climates to which our teachers would apply it. In many cases, there can be no doubt, it would be reckoned rather a load pressed on their shoulders than a boon cast into their lap; and, in every case, it is as much our duty to inquire whether they are fit for the British constitution, as whether that same constitution is fit for them. As to their power to govern or to defend themselves, that in the early stages of their progress we have proofs multiplying upon us that they cannot; nor in the particular instance of defence, is it right, or reasonable, that they should? The protection of the colonies is an imperial duty, which we can neither abdicate nor intermit. It is somewhat different with the internal administration of their affairs. These form the proper sphere for their own activity and their own address; but, in both cases, the superintendance and control of the imperial Government is a thing of which nothing ought to interrupt the occasional exercise, or to dim, in any sense, the perpetual recognition. The colonies want, in the main, to be let alone; they ask to cultivate their own fields, to work their own mines, and to export and carry to market their surplus produce, with as little external interference as possible. Defend them from all foreign interruption, and allow and encourage the increase of their numbers and of their industry, and, in a few years, you will become the founders of a brotherhood of commonwealths, upon whose prosperity the sun of heaven does not go down. It is a part of this policy of quiet encouragement, and of non-interference, which has led the Government to withdraw its claims to the royalties, which, at one time, it was intended to levy on the mines of the colonies, whose rich ores are now making themselves felt in the markets of Europe; and another instance of the care and liberality of the Crown—that it has recommended to Parliament such an improvement in the old navigation statutes, as is likely to operate very beneficially on the trading interests at large of those dependencies, whose prosperity and happiness, in all material things, is the prosperity and happiness of England herself.

THE LONDON AND NORTH-WESTERN RAILWAY.

THE DISPUTE WITH THE ENGINE-DRIVERS AND FIREMEN.

We deeply regret that this important dispute—important not only to the parties immediately concerned, but to the public, whose safety, it may easily be conceived, is, in some degree, at stake—yet remains unsettled. Yesterday, at the usual half-yearly meeting of the company, several shareholders questioned the directors on the subject, and generally expressed a desire, that neither the wages of the engine-drivers should be reduced, nor that "in any scheme of saving, such as that alluded to in the report, those skilful men should be the sufferers."—Mr. Glyn (the chairman) said, that there was not the slightest intention of reducing wages, and expressing the confidence of the directors in Mr. M'Connell (head of the locomotive department, and the author of the proposed changes which have led to these unhappy differences), and announced their determination not to allow "the executive to be dictated to." He added—"That our other artificers have come forward in a most excellent spirit, and that we have received such assistance from the north, and from public establishments, that we shall be able, without the slighest difficulty—even if these misguided men still pursue the course they are now pursuing—to carry on the public service without the least detriment to the public safety."

Previous to the meeting of the shareholders yesterday, a deputation of the engine-drivers waited on Mr. M'Connell, at the Camden Station, with the hope of coming to some arrangements, but he declined to entertain the question of the withdrawal of the classification, and the deputation then proceeded to the Euston Station. They there saw the locomotive committee, who announced that the directors were determined to stand by the classification system promulgated by Mr. M'Connell. The men, on their part, expressed their firm determination, at all hazards, to adhere to their notices, and leave the service of the company, if that system were adhered to, being convinced that, whatever might be the opinion of the directors as to its operation, it would ultimately lead to a reduction of wages.

The engine-drivers and firemen, who seem to have played their part in this controversy with singular firmness and moderation, have held meetings nearly every evening during the week, at the Railway Tavern, Hampstead-road. Last night they met at 10 o'clock, when a statement was made as to the result of the deputation.—Jonas Brown (the chairman) in his speech, stated that their quarrel was not with the directors, but with Mr. M'Connell and his system of classification; and that they were "as determined as ever, never to submit to the tyrannical conduct and the well-laid scheme of Mr. M'Connell to do to them, what every man acquainted with the railways of this country knew he had done to the engine-drivers and firemen on the Birmingham and Gloucester Railway. To prove to the company that they were entitled, at any rate, to consideration, and that they had not lightly stood out against this cleverly contrived scheme of Mr. M'Connell's, he mentioned the periods of service during which those who had sent in their notices to quit the company's service on Monday next had been employed upon the railway. Four had been upon the line for six years; six for seven years; 15 for eight years; 25 for nine years; 11 for 10 years; and six for 12 years and upwards—or, to state it in round numbers, 67 out of 120 drivers, who had sent in their notices, had been in the service of the London and North-Western Railway Company upwards of six years. They never had any dispute with their employers up to the time Mr. Bury left; and, if they had had a kind-hearted man to deal with, there was nothing the directors could have asked in reason that they would not have readily submitted to. But there was a point of ill-treatment, beyond which no man, be he workman or gentleman, ought to submit; and it was at that point they had stopped, and had determined to make their stand."

A variety of statements were then made, as to the manner in which the trains were managed by the men, who had been suddenly raised to the rank of engine-drivers, without any previous knowledge or experience. One had run his engine down "the eastern incline," and smashed a first-class carriage and a horse-box; another had burnt out the inside of a new engine; a third, by suddenly quickening the speed, near Harrow, broke the connecting chains of a goods train, and backing upon the part left behind, upset the cargo in such a manner, as to obstruct the line for an hour and-a-half; and a fourth overloaded the engine with water, and came to a dead stand for 40 minutes, which time was occupied in getting up the steam. Again, on Thursday, the engine of a train, on the Aylesbury track, got out of gear; and, after examining her for some time, the engineman, on being asked by the passengers what was the matter, declared that he did not know; and he was only able to proceed, on the guard pointing out to him what he was to do.

A considerable number of statements of this kind were made. It was also stated, that the men on the other divisions of the line—from Birmingham to Carlisle, and from Manchester to Liverpool—fearing that the classification was intended to be carried throughout, should the directors be successful in getting it into operation on the southern division of the line, had resolved at once to send in their resignations.

Without expressing an opinion as to which party is in the wrong, we beg to remind the directors, that this is no common strike. Ordinarily, the only persons injured by strikes are the workmen; in this case, the limbs and lives of all her Majesty's lieges, who are so unfortunate as to be compelled to travel on the line, are at stake. They ought, therefore, to take some other means of inducing their engine-drivers to submit to this classification, if it be indispensable, rather than run the imminent risk of accidents and loss of life.

Mining in France.—The last reports from the mining districts throughout France, represent business generally in a very gloomy state, as the great scarcity of money, and the few orders, prevents enterprising adventurers embarking largely in working their mines, or blasting their furnaces. There is, however, a trifling improvement on the last few months; but the depressed state of every branch of industry has had a most fatal effect on mining speculations, and particularly that of railways, as the traffic, both for passengers and goods, has so decreased, that the greater portion of the companies are reducing their establishments to the most economical footing; and those railways that were only partly completed, or projected, are at a stand-still, for the want of funds—consequently, the iron trade and the colliery proprietors suffer greatly from this monetary crisis. The Government is introducing the strictest economy in the naval department; and at Brest, Cherbourg, L'Orient, La Rochelle, Rochefort, Bayonne, Toulon, &c., several ships that were on the stocks will remain so for the present year, without being further completed; and in the steam navy the greatest saving in every branch is being made by the marine authorities; so that the demand for British iron and machinery will, for a time, be very limited for the national marine arsenal for ships, &c.

Mining in Belgium.—The unsettled state of the affairs between Prussia and Denmark, and in fact the whole of the north of Europe, has greatly depressed her commerce in every branch, but more especially her foundries and collieries, which added to the extreme scarcity of ready cash, and the suspension of so many works in the railways, it will be some time before she will recover from the effects of the revolution in France, and the unsettled aspect of the continent, from north to south and east to west.

IMPROVEMENTS IN ELECTRIC TELEGRAPHS.

[Specification of patent granted to Henry Highton, of Rugby, M.A., and Edward Highton, of Regent's Park, Middlesex, C.E., for improvements in electric telegraphs. Patent dated January 25, 1848.]

This invention is described as consisting of 15 parts, and the description is arranged under that number of heads. The following gives the substance of it, but the enrolled specification must be looked to for the exact details of this important invention:—The first part consists in producing a power for moving pointers, and for other purposes, by means of horse-shoe magnets, surrounded by multiplying coils of wires, and suspended on an axis. Several methods of using them are described, with the axis between the legs of the magnet, and at right angles to the plane in which the legs lie, so that the magnet shall oscillate in that plane; and, again, with the axis running through the middle of the magnet, and in the same plane as that of the legs of the magnet, so that they shall oscillate at right angles to that plane. There are described also several methods of combining two or more horse-shoe magnets together, and surrounding them with multiplying coils, so as to unite their effects. By the employment of horse-shoe magnets, thus arrranged, all the effects capable of being produced by magnetic needles can be obtained.

The second part of the invention consists of a system of finger keys, for the purpose of producing the greatest possible number of variations in the manner of transmitting electrical currents along telegraphic wires, each single key forming one of those variations. The number of variations capable of being formed is described as represented by the number three, raised to the power of the number of line wires, minus one. Thus, the variations on three wires are 26—the exact number of the letters of the alphabet; so that by a set of the finger keys, marked with the letters of the alphabet, and combined with instruments afterwards described, a person has nothing to do but to sit down before one of these instruments, and touch in succession the keys as required, and, at some distant station, the letters and words are either instantaneously printed, or exhibited to the eye. With four wires, and their corresponding keys, 80 different symbols may be exhibited, and so on.

The third part of the invention consists of an instrument, for the purpose of completing the circuit of secondary batteries, which, as it requires to be often mentioned in the after part of the specification, the inventors call by the name of *perænode*, from two Greek words, signifying the "completion of a circuit." The peculiarity of the instrument consists in its capability of completing, at a distant station, one of either of two different circuits, without the possibility of any accidental confusion by the oscillation of the magnets used.

The fourth part consists in a method of arranging screens one behind another—so that when they are moved to the right, or left, by the electrical power, they instantaneously show the required letter, or symbol, out of the whole number, capable of being exhibited by the variations of the method of transmitting the currents along the number of wires used. They are used in combination with the keys before described—so that each key causes the screens so to move as to show at once the letter, or symbol, corresponding to the key. Thus, with three wires, and the corresponding system of keys, any one of the 26 letters of the alphabet may be instantly exhibited; and, as fast as a person puts his fingers to the keys, the corresponding letters are read off at a distant station. With four wires the number of symbols is increased to 80, as before.

The fifth part of the invention is a peculiar kind of escapement, adapted to producing the motion of paper, &c., for the purposes of telegraphic printing. The movement produced is an unequal step-by-step movement, of such a kind, that at the first step the paper may move so very small a distance, as to be virtually almost in a state of rest, while the type hammer strikes down upon it, and in this way a clear impression of the type is produced; whilst the second step, which takes place during the return of the type hammer, moves the paper the distance which is usually preserved between letters in printing. This invention enables any of the escapements, known as locking escapements, to be used in telegraphic printing; and thus, at the same time, also is secured a clear impression of the letters, and a perfect uniformity of distance between them.

The sixth part consists in a contrivance for producing greater rapidity in the use of a revolving disc, with a step-by-step motion, either for the exhibiting, or printing, of letters, or other symbols, and for remedying the great defect in such plans, as formerly used—which is, that one slip, or error, makes all the subsequent letters wrong, till the discs at the different stations are set right again by hand, so as to correspond with each other. This contrivance enables the disc, by the reversing of the electric current, to be thrown forward in its revolution, at one bound, to zero, or its starting point. Thus, supposing that the word to be exhibited, or printed, begins with the letters B A, the disc is moved, by a step-by-step movement, to the letter B, which is then shown, or printed; the current is then reversed, the step-by-step movement is thrown out of gear, and the disc completes its revolution to zero, by one bound, ready to be moved forward again by the step-by-step movement to the letter A; and whenever the disc thus completes a revolution, which would be, on an average, after every two letters, all the discs at the several stations would necessarily, by the movement itself, be set so as to correspond, and, consequently, one slip, or error, in any of the instruments, would entail no consequent errors—a defect in the instruments heretofore constructed, which has prevented their practical use; and it is plain also, that about half the time required for transmitting a message would be saved. Under the same head is described also the additional apparatus necessary for the printing letters so moved forward—namely: the apparatus for driving the hammer down to strike the type upon the paper, holding the type whilst the hammer strikes it, and then allowing it to complete its full revolution, so as to commence again at the starting point, all being effected by the electrical power, conveyed along one single wire, and the secondary batteries connected with it.

Under the head of the seventh part, is fully described in detail the method of combining the *perænode*, and its secondary batteries and electro-magnets, with the escapements described under the fifth and sixth heads; so as to exhibit to the eye any communication by means of the alphabet, inscribed round the edge of a disc—the whole being governed by means of a single telegraphic wire, extending from a distant station.

The eighth part of the invention is the printing, or stamping, by means of the power derived from secondary batteries. Several methods are shown in which this may be accomplished with different numbers of wires, and different apparatus connected with them. The first method shown is where three line wires and three *perænodes* are used, working six type hammers, which, by their combinations, form a peculiar symbolical alphabet—illustration of which is afforded in the specification, but prevented from appearing here from want of space. A form of instrument is next described, of a rather more complicated kind, by which a communication may be printed, not in the symbolical, but in the ordinary, type. By the variations of the currents formed by wire *perænodes*, any one of 26 type-hammers are moved, so that the keys before described are touched in succession—the corresponding letters are instantly printed at a distant station. Other additional instruments are afterwards described, by which, through the means of *perænodes*, and a step-by-step motion, communications may be printed in ordinary type, using one or two wires—the use of two very much increasing the rapidity of the printing—so that an average of only two or three step-by-step motions need be made for printing any required letter; but we could not make any of these plans intelligible in detail, without giving all the drawings which accompany the description in the specification. A corresponding method is also shown of exhibiting letters to the eye, where it is not required to print a communication, and where similarly only two or three step-by-step movements are required to show any required letter, or symbol.

The ninth part of the invention consists in the application of the *perænode* to Morse's American telegraph, by which means a telegraph, formed on that system, is able to do just double the work in the same time, when compared with what it can perform, when worked on the ordinary system.

The tenth part of the invention describes a method of either exhibiting or printing a communication in the ordinary letters of the alphabet, by means of a cord, band, or chain, to which is attached a scale with letters, or type, placed upon it. By means of three *perænodes*, the cord is so shortened as to bring any required one of the letters, or type, into a proper position to be exhibited or printed; or the type and letters are disposed round the circumference of a wheel, and the cord, or chain, passed round the wheel—and thus the shortening of the cord produces an angular motion in the wheel sufficient to bring any of the letters in the same way to some determinate place, for the purpose of being exhibited or printed.

The eleventh part of the invention consists in the use of a pedal for removing from, or putting into, a telegraph circuit an alarum apparatus, or for lifting from the liquid of a battery the metals employed; so that, on the operator leaving the instrument, the alarum cannot possibly be left out of the circuit, nor the metals be left in the liquid of the battery—preventing thereby the excessive waste of material, now caused by having the metals always immersed in the liquid.

The twelfth part is the employment in electric telegraphs of the solution of the salts of the ammonia, for the exciting liquid in the batteries employed. The inventors recommend this form of battery for telegraphs, in consequence of their constantly uniform strength, for great lengths of time. They state, that the ammonia evolved on the negative plates of the battery being soluble in water, does not form a coating of non-conducting substance on those plates, as is the case with hydrogen, in the batteries ordinarily used. They recommend, however, that the metals employed should be of considerable size, and be placed at considerable distance from each other.

The thirteenth part is a method of insulating suspended wires. Instead of the wires being carried outside the posts, they are carried through holes, bored either through the posts, or through arms attached to them; and in the centre of these holes are placed heads with transverse slits in them, reaching from the circumference to the centre, and causing them to resemble in shape portions of spirals. These slits enable the heads to be slipped on the wires, while it is impossible for the wires again to escape from them, without the head being forced out from the holes, and turned round in a transverse direction to that of the wire. This arrangement prevents the necessity of any covering to the posts—the wood round the holes themselves forming a sufficient protection. Means are also shown of conducting away any water which may trickle down the posts in wet weather.

The fourteenth part is the use of metals, glazed or enamelled, in the form of rods, or tubes, or other shapes, for insulating suspended wires. It is merely an application to telegraphic purposes of the art of enamelling metals, which is now so extensively employed for many other purposes.

The fifteenth part consists in the use of a metallic tag, similar in form to the tag of a boot-lace, for the purpose of protecting wires covered with varnished silk, or cotton, &c., from the effects of friction at the points of suspension. The claims are 15 in number, and correspond with the several parts of the invention as described—the whole forming a new system of electrical telegraphs, in accordance with the advanced state of mechanical and electrical science, and calculated to take the place of the rough and infantile systems of telegraphing hitherto adopted.

Patent-office and Designs Registry, 210, *Strand*, *August* 9.

First Trial of Baron Von Rathen's Locomotive Carriage by Compressed-Air on Common Roads.—We are informed, that a first and successful trial of this carriage, constructed in the workshop of the College for Civil Engineers, at Putney, under the immediate direction and plans of Baron Von Rathen, was made on Wednesday last. We have so often given notice in our columns of their different stages of progress, that we considered the first object of those experiments as the introduction of an entirely new, safe, convenient, and, according to the inventor, most economical system of locomotion, to be a matter of the highest importance and interest. The carriage, which is about 3 tons weight, travelled from Putney College to Wandsworth (about one mile), from beginning to end, with a uniform and regular speed of about eight miles per hour; and there is no doubt that it would have continued to run for 10 or 12 miles, as was originally intended, but for an unfortunate accident in charging the reservoir (a combination of cylindrical tubes), to a too high degree of pressure in the course of the test, by which the greater part of those tubes were impaired and partly destroyed. The cause of this explosion (by which, fortunately, no one was injured) is not fully ascertained, as, in most of such cases, the rest of the tubes, which remained air-tight, were only charged for the trial, and, by way of caution, to 24 atmospheres, instead of 50—to which extent the whole reservoir was formerly tried, and intended to be used, at this degree of pressure, which would have allowed the carriage to run 10 times the distance of the actual trial. Nevertheless, we may consider the problem of the practicability of compressing air in large quantities, and to a high degree of pressure, without great loss of power, by the invention of Baron Von Rathen's system, as resolved; and also, by his invention of a regulator and of an apparatus for expansion, the uniform working power is secured, and the loss by refrigeration in the expansion very much diminished. The greater or lesser distance of the trial can be, therefore, of no great consequence. We consider it highly to the credit of this institution for the education of practically and scientifically informed engineers, to have assisted and protected the inventor in carrying out the first experiment of such a valuable discovery, and, in its future destiny as a more perfect system of locomotion on railroads, so highly beneficial an invention; but we may otherwise repeat our caution, that this first experimental carriage cannot be considered in its practical parts as a perfect model carriage, which never ought to be expected from the first practical application of a combination of inventions.

The Copper Trade—Elbe Copper-Works.—A correspondent from Hamburgh writes—"The announced resumption of blockading the Elbe by Denmark has filled us with gloom and anxiety; and there is no doubt, since the rejection of the terms offered by the king of that country, that it will be prosecuted with greater severity than hitherto, and our already depressed commerce receive a severe blow. The inconvenience and loss experienced by the war must have been sensibly felt by the proprietors of the copper-works here. These works, which were commenced last October, and averaged a make of from 20 to 25 tons weekly of fine copper, had progressed so favourably and profitably, that the proprietors contemplated a considerable extension of their plant, and had built several considerable vessels, to carry their ore from South America. Owing to the blockade, these vessels have not been able to sail, nor the homeward-bound ones to reach here; and, this last two or three months, they have been obliged to discharge their workmen, and close their smelting-works, for want of the necessary supplies of ore. As they gave, both directly and indirectly, work to a great many labourers, and, consequently, weekly diffused a considerable sum of money, their suspension has been sensibly felt; but everything here, however, is nearly as bad."

The Iron Trade in America.—The correspondent of the *Birmingham Journal*, in his letter of last week, says—"The financial year of the Government closed on the 30th June; but, judging from the usual dilatoriness of the Treasury department, in issuing their returns, the details of our trade will not soon see the light. The opponents of free trade urge that, in consequence of English iron being forced upon our markets, encouraged by a low tariff, the ironmasters no longer keep their mills running night and day, as they did last year, and the markets of the west, which have hitherto been the chief customers of the Pennsylvania ironmasters, are in a great measure lost to them. 'Under the old law (they say), English hoop-iron did not as now find its way to the western and richest iron section of Pennsylvania, to be used as hoops to wooden buckets, at a saving of 25 per cent.; nor did the small bar-iron find its way to the lake countries in such an amount as to make a similar quality of the home-made article unsaleable.'—Some attention has also been drawn to the fact that some of our railroad companies have lately contracted for English iron at very low rates. The Erie Railroad Company, for instance, have made a contract for their rails at 6*l.* per ton, delivered in New York, which has called forth some petulant remarks from our ironmasters, who contend, with seeming justice, that we ought to be able to make the iron for our own railroads, as we have abundance of the raw material, and no lack of the ability to manufacture. The company, however, have doubtless been able to buy cheaper abroad than they could do at home, and during the current year some millions of dollars will be sent abroad for this article. The exports from this port for the first six months of 1848 were $22,377,881, of which over $7,000,000 were in specie—this leaves a balance of trade against us in New York alone of over $24,000,000, at the same time that we have been drained of so much specie. Under all the circumstances of the case, I think your mercantile readers will agree that it will be their true policy to consign lightly, as it is ours to import with caution, as the state of affairs in Europe may instigate many parties who must sell, to seek a market here at any sacrifice."

The Mining Districts of Lanarkshire.—We regret to be informed that the mining districts of this county are in a very desturbed state, in consequence of the agitation which has been kept up for some time past by the mining population, with a view to an advance of their present rate of remuneration. During the last week large meetings of colliers have been held in the principal districts, at which the wages question has been discussed; and on account of the employers showing little or no disposition to come to terms with the men, strong disaffection prevails. The demand of the workers is, to have 1*s.* 6*d.* per day in advance of their present rate (which is 2*s.* 6*d.*); and from all accounts they are resolved to gain this increase, which they allege the masters are perfectly able to give, with a very little addition to the market price of coal and iron. We understand that the Lanarkshire yeomanry cavalry are under arms, and stationed in troop in Holytown, Bellshill, &c. Their appearance amongst the colliers has rather increased than lessened the excitement. A collision between the yeomanry and the people occurred near Holytown yesterday, but did not turn out so serious as was at first reported.—*Glasgow Saturday Post.*

North Staffordshire.—Capt. Simmonds (the chief Government inspector of railways) made an experimental trip over the branch from Stoke to Uttoxeter, acccompanied by the engineer, the manager, and the contractor, with a few other gentlemen, when the state of the works along the line was carefully examined, more especially the temporary bridge across the market-place at Longton, and the tunnel at the Mear; and Captain Simmonds, after expressing his approval of their stability, gave his official sanction to the opening on Monday last.

Original Correspondence.

COPPER SHEATHING.

Sir,—I have read, with great interest, the articles that have, from time to time, occurred, in your valuable Journal on this subject. Although not much conversant with the analyses of the different qualities of copper sheathing used in ships' bottoms, I do not think the deterioration can, in any way, be remedied by the practical smelter, until he has obtained a better and more perfect knowledge of chemistry than he at present is in possession of. It is an indisputable fact, that different ores produce various qualities of copper; but at present, disregarding this, or without inquiring into the component parts of the ores, the great business of the refiner is to make his metal as tough and malleable as possible with the least loss; and, I believe, scarcely any of the cake copper, from which the sheets are made, average more than 96 to 97 per cent.

That the excessive purity of the copper does not render the sheathing less liable to decay, has, in several instances, been clearly proved. Some years since, experiments were ordered to be made by the Lords Commissioners of the Admiralty, when it was found that sheathing, in one instance, with an alloy of zinc, and in another with that of tin, had remained perfect 27 years; while another, in which the copper was found perfectly pure, was nearly destroyed in four years; and it has been stated, on undoubted authority, that since Government have attempted to purify the copper, it has been more liable to decay. That a small quantity of sulphur remaining in the copper does not deteriorate the sheathing, has been sufficiently proved in the case of several Norwegian ships, trading from different ports of Norway to tropical climates. These vessels, though subject to the salt water of the southern seas, which is often alleged as a cause of corrosion, have, after 20 years, their copper scarcely worn. The copper used here is from the poor ores of the mines of Roras, near Dronthiem; the plates from which the sheets are manufactured invariably contain a more than average quantity of sulphur, and it is on account of the magnetic iron pyrites and sulphur contained in the ores, combined with the low per centage of the copper, excessively difficult to refine. Sir Humphrey Davy's protectors, which rendered the copper electro-positive, though in a great measure they remedied the corrosion, were found to be almost useless, as the bottoms of the vessels became incrusted with sea-weeds, nautical insects, &c., which, rendering them foul, caused the ships to be dull sailers; this was likewise found to be the case when they were laid up in harbour. This proves the theory of protection was correct, though its practical application, owing to these circumstances, had failed.

In the year 1831, M. Uzielli obtained a patent for composing an alloy to be mixed with copper for sheathing, in order to prevent its oxidation, which, though brittle when cast, is, by his process, made into malleable sheets. The proportion which he recommends is about 5 to 7 parts of tin to 100 of copper—a less quantity of tin than 5 per cent. makes an alloy liable to oxidation; while a greater quantity than 9 per cent. renders it hard and brittle, and requiring so much care in the manufacture, as to render it too expensive for sale. His process is thus described:—"The copper, having been melted in a reverberatory furnace, or any other suited to the purpose, or iron crucibles, the tin is added, and then the metals are well mixed, and combined together by stirring, while in a state of fusion. The melted mixture, or alloy, is then to be well heated, and a sufficient quantity poured into moulds, formed between two smooth tables of granite, or other suitable substance, so as to obtain a flat plate of from $\frac{3}{8}$ to $\frac{3}{4}$ in. thick, according to the thickness of the sheets required. These plates are then placed in an annealing, or other suitable furnace, where they are gradually heated for three or four hours to a dull red heat, when the alloy contains from 5 to 7 per cent. of tin; but if it contains more tin the heat must be lower, and applied more gradually, and if less tin, the reverse. The plates are then allowed to cool gradually, which will take about an hour; and, when perfectly cold, they are passed between rollers, set so as to effect but a very slight reduction of the thickness of the plates—about $\frac{1}{2}$ in. in 2 ft. length. The plates being again annealed, and carefully cooled, as before, are repeatedly rolled, until the texture of the alloy is changed, as may be known by the fracture being found close and fine grained, instead of crystallised and with facets, as it appeared when first cast. With the proportions before recommended, the close and fine grained texture generally takes place after 12 or 15 operations of annealing and cold rolling. After the texture of the alloy becomes thus changed, it may be heated more rapidly, and to a higher temperature, and cold rolled, so as to lengthen the plates, which, when cast, were of 2 ft. length, 6 or 7 in. after each annealing. The plates, or sheets, are then rolled double, in the ordinary way; care must, however, be taken that they are always rolled in the same direction."

I do not know whether the alloy patented by Mr. Uzielli has been brought into much practical application, nor am I competent to judge of its merits or demerits; neither should I have introduced it here, had it been mentioned by any of your correspondents. Muntz's patent metal, which is used for bolts and sheathing, is, as well known, composed of copper and zinc. I think that the general use of alloys with copper, and their prevalent use to other purposes, sufficiently proves that the goodness and durability of sheathing is not increased by the purity of the copper; but, on the other hand, rather decreased. To arrive at a correct result, will, no doubt, be a task of no small difficulty; but I think a tolerable approximation to the truth might be arrived at, by taking an analysis of different sorts of old sheathing, finding the component parts of those which have lasted the greatest length of time, taking into consideration climate, action of salt water, and other causes, which could have acted on the metal. When this result was arrived at, it would then be easy for the chemist to give such information to the smelter, who, at the same time, should have a knowledge of the component parts of the different ores, so as to select the quality necessary to make the copper most suitable for the purpose.

London, August 9. GERMANICUS.

COPPER SHEATHING.

Sir,—The interesting letter of Mr. Prideaux, on smelting and sheathing, in your Journal of the 13th July, I did not reply to in the following Number, as I intended; but, finding that some of your correspondents had noticed it, I waited Mr. Prideaux's rejoinder. I, however, cannot help thinking it evasive—he seems to solicit information and co-operation, and, at the same time, not to want it. He apparently wished to see if any modification in the processes of smelting affected the copper; and now, it seems, he can get any information upon these things *privately*. These statements are certain to prevent co-operation of workmen—namely: thinking lightly of the information they can give; for we know nothing but from practice. One modification Mr. P. refers to as a cause—viz.: calcining the ore in heaps. When this was generally practised, a falling off of the quality was observed; this process is still practised at Pary's Mines, Anglesea, and no doubt they make good copper; but it is because the ores are good, not the mode of calcining; for the same mode is practised in works on the continent, where the most inferior copper is made.

Mr. Prideaux also suggests the introduction of foreign ores as the probable cause of the falling off; but it appears that the quality was deteriorating long before foreign ores were introduced. Besides, the general character of these ores is to make good copper; the smelters used to purchase Anglesea copper, as a medicine for that made from bad Cornish ores; but since foreign ores have become so plentiful, they are not now necessitated to do so; and, indeed, were it not for the quality and quantity of these foreign ores, many of the Cornish could not be wrought, from bad copper being in them. All smelters use the same process; and, except modifications in construction of furnaces, and other mechanical operations, there has been no change since many years previous to the time Mr. P. states the copper to have been deteriorated. Nevertheless, all smelters do not succeed in making copper of the same quality—some excel more in one sort than another. A common idea among the practical smelters is, that the cause of the difference in quality is from the presence of sulphur, and that it sometimes gets fixed in the metal, so that no refining can take it out—I speak of copper made from good ores, as there are ores that no one can make good copper from; but Mr. P. says, that he has never discovered sulphur in copper. I had always thought that chemistry would throw light upon this; but Mr. P. says, that no laboratory experiments will do anything, except along with the practice. Now, no chemists are kept at smelting-works—how then are the benefits he talks of to be realised? We can tell him nothing but he either knows, or can get privately. Everything is so familiar to us, that nothing appears worth telling. My impression is, that Mr. P. must ask questions for illciting what he wishes to know. If he has analysed the good and bad copper, has there been nothing to suggest a cause of the evil? Although analyses may not be understood by us, still we feel an interest in seeing it performed; and it may lead our smelters to employ men of science. We are anxious to learn, and willing to co-operate, if we knew in what way; but, probably, Mr. P. would rather have the co-operation of employers.—J. J.: *Swansea Aug.* 1.

COPPER SHEATHING—ITS WEAR AND TEAR.

SIR,—I observe, in a communication signed "Smelter," in your Journal of the 22d inst., that he considers a chemist would be a great acquisition in copper smelting establishments. I would just observe, that every smelter ought to be capable of discovering the composition of copper ore, and the various minerals contained in it—if not, he is no smelter. My time is too much engaged this week to allow me to go fully through the process of copper smelting; I will, however, point out an improvement which can be adopted, without putting the smelter to any inconvenience in altering furnaces.—1. All the sulphurets of copper should be calcined until the sulphur disappears.—2. In smelting the produce will be increased, and the scoria much cleaner, from the foreign matters being discharged.—3. In roasting you discharge a large quantity of gases, and be ready much sooner for refining. It is not convenient to avoid the use of iron tools in smelting, but it is a fact, that the more iron is used the more brittle the copper. It is evident, that iron assists in disengaging sulphur more freely. All ladles for copper smelting should be well loamed with clay and horse-dung, and this will prevent all effect of iron on the copper.

Swansea, Aug. 3. —— SMELTER & REFINER.

ON THE OXIDATION OF SILVER AND COPPER.

SIR,—It is only within the last few days that my attention has been directed to two letters, published in your valuable Journal of the 15th and 22d July, relative to the absorption of oxygen gas by pure silver in a state of fusion, and its subsequent evolution on the metal again returning to the solid state, or I should certainly have replied sooner to the doubts expressed in the letters of Messrs. Stagg and Mullins, as to the truth of the facts. I have now, however, to request that you will do me the favour of inserting the enclosed letter on the subject, written, as you will perceive, upwards of 30 years since, by my late father (who was, I believe, the first to discover the fact, and which was subsequently confirmed by the researches of the illustrious French chemist, M. Gay Lussac) to my late venerable friend and preceptor, Dr. Dalton, as I think it will afford a satisfactory answer to the doubts on the subject expressed by the gentlemen alluded to; and, in addition, allow me to state, that having myself been engaged for above 30 years in various metallurgical operations connected with the smelting and refining of gold and silver ores, &c., I can fully confirm the truth of all the facts named in my relative's letter; and I may further state, that whenever I have required a supply of oxygen gas for the purposes of experiment, I have always resorted to this source as the cheapest and most expeditious mode of obtaining it, and invariably with complete success. It may, perhaps, be well to state, that the silver must be perfectly pure and free from any alloy, as a very small portion of this latter will entirely prevent any "spranting" or "spirting," nor is there any gas evolved when the alloyed silver is poured into water. With respect to the amount of the gas absorbed by the silver, it was, I believe, determined by M. Gay Lussac, as I cannot find any statement of my father's on this subject.—WILLIAM LUCAS: *Attercliffe, near Sheffield, August* 8.

Letter from S. Lucas, Esq., to Mr. Dalton.

SIR,—When I had the pleasure of seeing you in Manchester, I mentioned having observed that pure silver, when melted, and while in a fluid state, had the property of uniting with a small proportion of oxygen, not only from the atmosphere, but also from other bodies, which gave it out at a suitable degree of heat, as some of the nitrates, for instance; and that the oxygen thus absorbed remains united with the silver only so long as it continues in a fluid state, or while fluid, until some substance be applied having a more powerful attraction for the oxygen. In proof of this, I now send for your inspection a few specimens of silver that have been in the different states, and which carry the external marks, and also a bottle of gas collected from silver which had been exposed to the influence of the atmosphere by cupellation. If silver, in large quantities, after having been exposed, in a melted state, to a current of oxygen gas, or atmospheric air, be allowed gradually to cool, the surface at first becomes fixed or solid; this soon bursts, ebullition ensues, and an elastic vapour, in considerable quantity, escapes, driving before it a portion of the internal fluid metal, which becomes solid as it is brought to the surface, and produces the protuberances, as shown in the accompanying specimen, No. 1. This ebullition continues from a quarter to half-an-hour, or more, according to the quantity of silver, and the rapidity with which it is cooled. If, instead of cooling gradually, it be made to assume the solid state suddenly, by pouring it into water, still the same phenomena occur—an ebullition takes place, and oxygen gas is evolved; but as the silver is so much divided, and passes so suddenly from the fluid to a solid state, the protuberances are proportionably minute, and are spread more equally over the whole surface, as will be seen in specimen No. 2. No. 3 shows the arrangement of crystallisation which the silver assumes when the gas is separated from it, during the time of its becoming solid. I have before observed, that substances having a powerful affinity for oxygen will take it from the silver, even while in a fluid state: thus, if charcoal be spread, for a few moments only, on the surface of silver that has absorbed oxygen, the whole of the oxygen will immediately be taken from it; no ebullition, or escape of gas, occurs, whether it be cooled gradually, as in specimen No. 4, or when poured into water, as in No. 5. By comparing these two specimens with Nos. 1 and 2, a very great difference will be observed, which is occasioned wholly by the escape of gas from the latter, while no such circumstances attended the former. The bottle of gas, which you will receive herewith, was collected in the following manner:—Some silver, after cupellation, till in a state of perfect purity, was poured, by a few pounds at a time, into a vessel containing about 30 gallons of water, and an inverted bottle, previously filled with water, and with a funnel in its mouth, being instantly placed over the silver, as it was each time poured into the water; the gas, as it was given out, and arose from the silver, was thus collected in the bottle, until it was filled. Care is necessary, that the neck of the bottle be kept below the surface of the water, to prevent the access of atmospheric air; and I am not certain that there is not a little admixture.* In addition to the above, I have enclosed two samples of copper, in two different states, both, however, equally pure, except that one is believed to be combined with oxygen, and the other not. No. 1 is a sample taken from a furnaceful of about 5 cwts., when in a melted state, and which had been exposed uncovered to a current of atmospheric air for about two hours before, and during the time it was smelting. This, when poured into water, exploded most violently, as will be seen by the small, which was attempted to be granulated. The specimen No. 2 is a sample from the same copper, after the surface had been covered with charcoal for about half-an-hour. This, you will perceive, is in a very different state from the other, and, when poured into water, granulated without any explosion, as the small bits will show. SAMUEL LUCAS.

Sheffield, May 31, 1815.

* A foot-note, with the initials "J. D.," in reference to this, states—"I found this gas (6 contain 86 or 87 per cent. of oxygen."

INDIAN IRON AND STEEL.

SIR,—Mr. Radley, in a letter, which appeared in your columns, more than a year ago, bore testimony to what he termed "the splendid memory of my late father's talents." My father's opinions must, then, possess great weight with Mr. Radley; I, therefore, refer to page 155 of my father's work, upon *Iron and Steel*, where the following passage occurs:—"The iron-making operations of the East never went beyond the bloomary and the furnace of the Catalans, until the talents and enterprise of J. M. Heath, Esq., introduced into India the charcoal furnace of England, and succeeded in making pig-iron of a proper quality in great abundance from the same ore from which the best Wootz steel is made." I have now before me testimonials from 20 manufacturers and engineers, including Messrs. Reeves and Greaves, the celebrated sword cutlers—all uniting in bearing testimony to the pre-eminent excellency of Mr. Heath's Indian iron, as applied to iron and steel-making. Again, in a report, published in April, 1845, by Smith and Ebbs, printers, Towerhill, London, a full and explicit account is given of all the difficulties with which the Indian Iron Company had had to contend up to that date. Had Mr. Radley perused this document, he would have put himself in a position to judge more accurately of Mr. Heath's merits as a metallurgist than he appears to have done. One of Mr. Heath's original discoveries, and which Mr. Radley would perhaps term a metallurgical quackery, was then estimated by my late father—namely: "As the greatest discovery in the art of steel-making which has appeared since the invention of cast-steel"—I allude to Mr. Heath's process for conferring the welding property upon cast-steel, and improving at the same time the general qualities of that invaluable material. The merits of this invention have, I believe, never been called in question. If Mr. Radley has ever devoted his attention to the nature of steel, he must be aware, that steel cannot be formed by processes which are each the *very opposite* of the other, and that his remark to that effect is chemically and practically an erroneous one. As Mr. Heath was for many years the valued friend of my late father, the preceding remarks are not, I imagine, uncalled for; neither are they made with a view to lessen Mr. Radley, nor to exalt the merits of Mr. Heath unduly; with such a view, they would be indeed superfluous. My wish is to place the matter in a proper light.—ROBERT MUSHET: *Coleford, July* 31.

IRON AND STEEL.

SIR,—I have no wish to attempt to treat—*de omnibus rebus*—far less to intrude into the mysteries pertaining to the *quibusdam aliis*, which my friend, "Ferreus," can alone be expected to elucidate. Perhaps, the fracture of pigs of iron *ought* to exhibit to the eye the particles of malleable iron which they contain. Perhaps, also, the fracture of porcelain china *ought* to exhibit the particles of alumina; but this *ought*, assumed by "Ferreus," is not borne out by the inspection of the fracture of either iron or china. I know of only one really exact science—viz.: arithmetic—and its extended and general form of algebra. As no other science is strictly exact, or founded upon principles which admit of an exact definition or demonstration, so no other science can reasonably involve exact requirements. An approximative explanation is all that can be looked for upon many of the doubtful points involved in the details of an imperfect branch of science, such as metallurgy. There is, I believe, no uniformity of substance in castings made direct from the blast-furnace; nor can they, in any instance, be depended upon to the same extent as foundry castings. This tends to confirm my views; because the iron in foundry castings has undergone one additional melting and two cementations more than simple pig-iron; and its component particles are more nearly assimilated, and possessed of homogeneity, which is usually an essential characterstic of strong castings. On the other hand, the absence of this homogeneity, and the more crude mixture of the various kinds of iron alloyed to form pig-iron, renders blast-furnace castings inferior and less to be depended upon than foundry castings.

The bi-form monster, conjured up by "Ferreus," could only exist on the supposition, that the difference of specific gravity between fluid cast-iron and hot malleable iron is considerable, which is not the case. The malleable particles do not, therefore, rush to the surface of the metal; they possess only a slight degree of buoyancy, and have, therefore, a tendency to rise to the surface, when the metal has attained a state of rest previous to its consolidation. Will "Ferreus" say decidedly which work is the stronger—that made with mottled, or that formed from No. 1 pig-iron? He has left this question involved in ambiguity. The uniform levity of malleable iron, beyond a certain temperature, is not a matter of mere assertion; but of easy proof by experiment to all who can command access to a crucible, containing melted cast-iron, and who are provided with some malleable iron filings, or pieces of iron wire. Before the filings, or the pieces of wire, are fused, they will appear at the surface. If this does not arise from their levity, compared with that of the resisting medium in which they are immersed, what does it arise from?

How a given quantity of matter, fluid or solid, can, in a crystalline state, occupy more space than when in the state of particles, possessing a spherical form, appears to me inexplicable, as stated by "Ferreus"—for the spherical particles can touch each other but in one point; whilst the solid crystalline arrangement involves the coincidence of respective pairs of crystalline facets in all their points, and excludes, *a priori*, the condition of porosity which attaches to matter made up of spherical particles. "Ferreus" must give a better explanation of the expansion observed during the consolidation of water or malleable iron—for, as yet, I cannot agree, that these phenomena have been satisfactorily elucidated.

It seems hard to convince "Ferreus" that the surface of high-blown metal is, to a considerable extent, malleable—whilst the underside is destitute of this characteristic; but he may, in many ways, convince himself of the fact, if indeed he be open to conviction. The application of a file first to the surface, and then to the bottom of a piece of this metal, would convince any man that there is a very marked difference in the hardness of these opposite parts of the mass; and the extensibility of a portion taken from the surface at a low red-heat under the hammer, contrasted with the crumbling and dissipation of a portion taken from the underside, when subjected to the same treatment, would evidence to a candid observer, or experimentalist, that the surface possessed a certain amount of malleability, of which the underside was wholly destitute. As in a former correspondence with "Ferreus," I avowed that, for the limited knowledge which I possess upon the subject of iron, I am indebted almost wholly to my late father, I am at a loss to know in what manner I have incurred "Ferreus's" charge of disingenuousness and of inimitable assurance. I merely quoted, I did not claim the experiment which "Ferreus" first ridiculed as an impromptu aid to my theory; but which he now, by some quick mental process, very like the changing of saddles dexterously performed, admits to be all right, but only insufficiently explained. The reasonings and conclusions to which many of my father's experiments on the subject of bar-iron and steel had led him, will form a portion of his second volume upon bar-iron and steel, which he was preparing for publication, but did not live to complete, and which I hope to be able to edit at a future time; it would, therefore, be premature to detail them to "Ferreus." To ascertain that No. 1 iron gives out its carbon more readily than less carbonated iron, it is only necessary to subject equal pieces of each kind of iron to cementation in oxide of iron with exclusion of air. In a given time—say, 12 or 24 hours—the No. 1 iron will have lost more in weight than the other kind of iron; from this I infer, that it yields up its carbon to form carbonic oxide, and subsequently carbonic acid, more readily than a less carbonated kind of iron. That varieties of pig-iron depend upon the condition, and not always upon the amount of carbon contained, in the pig-iron, is not new to me, though it may be so as an established fact to Mr. Wrightson and to "Ferreus." It is now more than six months since I pointed out to Mr. Thomas, of the Millbrook Iron-Works, near Swansea, that some pig-iron, which was of an exceedingly light grey, verging upon mottled and white, actually contained nearly as much carbon as the richest Blaenavon No. 1 iron—the difference in appearance depending upon the state in which the carbon existed in each kind of iron. In conclusion, "Ferreus" confirms, by his final remark, my former statement—viz.: that pure iron, in contact with an oxidised substance, is in its most fusible condition. The reason that the unfortunate pure iron could not find one particle of carbon to unite with in the cementing region of the furnace, is simply because it did not stay there long enough, but came down to the melting region deoxidised, but not carbonated.

Coleford, July 31. —— ROBERT MUSHET.

DIALLING IN THE FOREST OF DEAN.

SIR,—I have to request the insertion of the following correspondence in your next paper.—GEO. LAWSON WHATLEY: *Mitchel Dean, August* 1.

No. I.—*To Robert Mushet, Esq., Coleford.*

SIR,—Mr. John Atkinson, of Coleford, has laid before me the *Mining Journals* of the 13th and 27th of May, and 17th of June last, and has drawn my attention to certain communications addressed to the Editor of that Journal, signed "Robert Mushet," and dated "Coleford," and which has led Mr. Atkinson, and also others, to the conclusion that they have emanated from you, and certainly contain most unfounded and libellous attacks against his professional and private character—attacks which, acting upon the advice of friends upon whose judgment he can rely, he cannot allow to remain unnoticed. I have, therefore, as the attorney of Mr. Atkinson, to request that you will inform me whether the libels complained of were written by you, and inserted in the *Mining Journal* by your direction; and, if so, I am instructed to demand from you a full and ample retraction of the unfounded charges and assertions contained in them; and also an apology for having made so unfounded and libellous an attack against the character of a neighbour, upon grounds which at the time of writing you had ample opportunity of ascertaining were wholly devoid of truth; otherwise Mr. Atkinson will feel compelled, in justice to himself, to commence legal proceedings against you. GEO. LAWSON WHATLEY.

Mitchel Dean, July 24.

No. II.—*To George Lawson Whatley, Esq., Mitchel Dean.*

SIR,—I am the author of the letters to which you allude. I wrote those letters when labouring under excessive irritation from erroneous views entertained by me of their subject matter. I have since satisfied myself that I have done the parties therein alluded to the greatest injustice, and that the remarks I made were without just foundation, and could not with truth apply to the parties alluded to, and especially to that individual whom I more particularly stigmatised. I have, therefore, contradicted the offensive statements in the *Mining Journal*. If your client, Mr. Atkinson, considers himself aggrieved, or in any way injured, by the matter contained in the letters in question, I shall be most happy to render him a sufficient apology; and that on the ground, that not one remark contained in those letters can, consistently with either truth or justice, be applied to him, in either his public or in his private character. I enclose you a letter of apology to Mr. Atkinson, which is fully due to him.—ROBERT MUSHET: *Coleford, July* 25.

No. III.—*To Mr. John Atkinson, Deputy Gaveller, Coleford.*

SIR,—I am informed that you consider yourself as alluded to and libelled by certain statements contained in my letters of the 13th and 27th May, and 17th June, which appeared in the *Mining Journal*. Those letters were written under great feelings of irritation, and under an erroneous opinion which I then entertained. I am now satisfied that those statements are incorrect, and I have, therefore, fully contradicted them in the *Mining Journal*. This must exonerate all parties to whom I have alluded. I have, therefore, to apologise to you for having hastily, and without justifiable grounds, made an unfounded and libellous attack, which has been fixed upon you, which I much regret, and of which I am glad to have this opportunity of stating that I believe you to be wholly undeserving; and that not one injurious statement contained in those letters can, either in truth or justice, be applied to you.—ROBERT MUSHET: *Coleford, July* 25.

No. IV.—*To the Editor of the Mining Journal.*

SIR,—In my letters of the 13th and 27th May, and 17th June, respecting dialling in the Forest of Dean, I have, as I find, done the grossest injustice to the three individuals alluded to therein, and especially to the mining engineer, who has directed the operations of boring, &c., at the work alluded to. I have clearly ascertained, that not one iota of blame can attach to this gentleman, and that he has conducted the work in the best possible manner. Whilst I must ever regret having given publicity to statements which may have given rise to injurious opinions respecting an individual wholly undeserving of them, I am most happy to be able thus publicly to insert a full contradiction of the remarks which I was erroneously led to apply to that individual, and this testimony will completely exonerate him.—ROBERT MUSHET: *Coleford, July* 24.

No. V.—*To Robert Mushet, Esq., Coleford.*

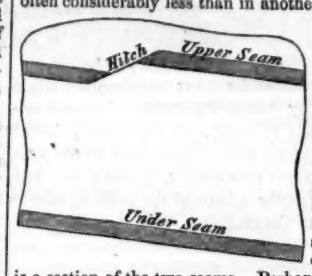
SIR,—I have laid your letter of the 25th ult. to myself, as also its enclosure of same date to Mr. Atkinson, before that gentleman; and I am instructed by him to say, that he is willing to receive those letters, in conjunction with your letter of the 24th ult. to the *Mining Journal*, as a sufficient apology; but that he feels it due to himself, to cause the whole correspondence to be published in that Journal on Saturday next; for which purpose I have, by this day's post, forwarded same to the editor.

Mitchel Dean, August 1. GEO. LAWSON WHATLEY.

[For ourselves, we can only say, that we deeply regret having allowed our columns to be made the medium of such an attack as that contained in the communications referred to. Knowing nothing of the circumstances commented on, and having every confidence in our correspondent, Mr. Robert Mushet, we published his letters—without, perhaps, exercising sufficient care or judgment, and which, had they been received from a writer whom we knew and esteemed less, would, most certainly, have led to their rejection.]

COAL WORKING—"HITCHES."

SIR,—I am no geologist, but there are questions regarding hitches which I have never heard satisfactorily answered. In working out various seams of coal—of course the one working below the other—a hitch in one coal is often considerably less than in another, though the two seams may not be a great many fathoms separate; and, quite possibly, some of your readers may be enabled to give satisfactory reasons for such variation. Again, we find hitches in under seams that are not found at all in upper seams; and very likely that also can be accounted for. But of late, in working an upper seam, my curiosity was a little roused at finding a 2-fm. hitch, where, in the under seam (12 fathoms deeper), there was not the slightest trouble, the minerals lying quite regular. The annexed sketch is a section of the two seams. Perhaps some of your correspondents, who understand the nature of these things well, will give a short article upon hitches, and note, in particular, that of hitches being found in upper seams and not in under ones. I have no hesitation in saying it would be very interesting to many readers of the *Mining Journal*.—N. B.: *Aug.* 5.



ON EXTINGUISHING FIRE IN A COAL MINE.

SIR,—Your correspondent of last week, under the above head, has, in my opinion, taken a very correct view of the subject. On the *principle* of extinguishing the fire, I quite agree with him; the part ignited might most readily have been cut off by a stone, or brick stoppings; and, as in the case he mentions, the other parts of the mine might have been kept in active operation, with very little loss either to master or workmen, whereas, at Mount Osborne Colliery, Barnsley, the works have been standing upwards of a month. I feel much surprised that this very important question has not excited more attention. A READER.

Barnsley, August 9.

ENAMELLING OF GLAZED PANS.

SIR,—Your Journal being extensively circulated in Staffordshire, and other parts where articles for domestic use are manufactured, allow me to solicit space to direct attention to a subject of very considerable importance to the public generally—that of a person being seriously affected from partaking some refreshment which had been prepared in a glazed pan. I will detail the particulars of the case as briefly as possible:—Mr. Callon, an eminent surgeon, was summoned at midnight to attend a gentleman who was alarmingly ill: he had returned from his office in perfect health; but, after having slowly eaten some preserves, was seized with violent palpitations and painful contraction of the muscles, succeeded by giddiness, vomiting, and cold, clammy perspirations. Mr. Callon ascertained that the preserves had been made in one of the glazed pans which have been recently introduced into culinary service; and, on examination, he found that portions of the glacious surface had been removed by some corrosive action—small portions of it being scraped off. As the symptoms were analagous to those of poisoning by arsenic, he administered the proper remedies to his patient; and the pan he caused to be conveyed to Dr. Brett, professor of chemistry at the Royal Institution. Dr. Brett states, that "a portion of the enamel had evidently been removed from the bottom of the pan, as if by the corroding action of some acid." A small portion of the enamel was chipped off from the side, and submitted to analysis, when unequivocal evidence of the presence of arsenic was obtained. Dr. Brett says, "I have also made some experiments upon the enamel of an iron saucepan, apparently of the same description as that which you submitted to me. I find certain acids capable of acting upon the enamel, and separating arsenic therefrom. The acids used were muriatic acetic (in the form of common brown vinegar), and citric acid, and in all these instances I detected arsenic." Dr. Brett is pursuing his experiments on this important subject. We learn that Messrs. J. and C. Clark and Co., of Wolverhampton, the original patentees of the glazed pans, have left with Dr. Brett one of their saucepans, with a request that he will analise the glazed coating, as they are confident that the articles manufactured by them contain nothing in the slightest degree injurious to health. Other parties have been permitted to manufacture similar pans under protection from their patent, and for those they cannot be answerable. As regards the utensils manufactured by them, however, they are stated to have certificates from men of the highest eminence, showing that their glaze contains nothing in the slightest degree deleterious. They expect to receive a certificate to that effect from Dr. Brett.—R. B. W.: *Liverpool, Aug.* 10.

SIR ISAAC NEWTON'S HOUSE.

SIR,—In the literary sphere of society, for several years past, much has been written, and the best feelings excited, with a view to the restoration of the house of our immortal dramatic author, William Shakspeare. Now, I want to interest you and the public in favour of the house of another immortal countryman, whose magnificent discoveries in the higher fields of science brought to light those sublime truths, which have since guided the civilised world, in everything connected with the more abstruse sciences—I mean, the immortal Sir Isaac Newton. This house, where he for years lived and studied, is situated in Martin-street, Leicester-square, and is fast falling to decay. The outside, and much of the inside, is exactly as it existed in his lifetime; the observatory on the top is now occupied as a workshop by two bootmakers—the worthy sons of St. Crispin being elevated to the chair of Newton: such is the result of time and circumstance. The other apartments in the house are let out in numerous weekly tenements, and it is in a sad state of delapidation. The Newton Hotel of Bertalini, well known to all frequenters of the west end, is close adjoining, and was named after Sir Isaac. I have, Sir, for more than a quarter of a century, resided within 100 yards of the house, and have gradually watched its decay. I often visit the shoemakers aloft, with a great deal of emotion; I have not words to express my feelings on the subject, but I never enter the house but I feel I am treading on hallowed ground—ground which ought never to have suffered the desecration it has. Sir Isaac Newton was born at Woolsthorp, a hamlet in the parish of Colsworth, in Lincolnshire, on Sunday, December 25, 1642, and died at Kensington, in Middlesex, on Monday, March 20, 1727.—A. SMITH: *Princes-street, Aug.* 10.

[I enclose you a perspective sketch of the house of the greatest man that ever this country produced; and if you will be kind enough to get a wood-cut for next week's Journal, I will send you some further particulars. I may add, that my mite, by way of subscription, is ready for a restoration fund, if such can be commenced.]

STEAM-CARRIAGES ON TURNPIKE-ROADS.

SIR,—In answer to W. Radley, on the subject of Sir James Anderson's steam-carriage, I may observe that, although I stated the effects of noise, steam, and fire, were objections more or less attendant on all former attempts at locomotion on common roads, I did not mean thereby to infer that there were not other objections; and I agree with W. Radley's conclusions, that, if the same cumbrous machinery and carriages, and the same kind of arrangements of the machinery, and modes of construction, be adopted, then success would be, as he reasonably infers, very doubtful.

Since I last wrote, I have inspected Sir James Anderson's steam-horse (if I may be allowed to make the comparison), and I have no hesitation in stating that, in my opinion, in almost every respect, it is vastly superior to any former attempt, either by himself or others, both for simplicity of arrangement and principle of construction; and that all the assumptions mentioned in the concluding part of W. Radley's letter, as needful to insure success, have been, in a great degree, accomplished by Sir J. Anderson in his present attempt. The weight of the entire engine, water, fuel, &c., will not, it is stated, exceed 60 cwts. I have, therefore, no doubt of its success—not that I mean to affirm that Sir James has arrived at *ne plus ultra*; but that he has, in my opinion, surpassed all former attempts, which I think cannot be disproved. But, whether successful or otherwise, it will not alter the opinion I have held, and still do hold, that steam, under the circumstances mentioned in my former letter—viz.: by adopting two timber tracks, or a track of 8 or 9 feet wide, made on the crown of the road, with finely broken granite, and cemented by an anti-absorbent concrete, 3 or 4 in. thick, laid on a firm base, so as to be nearly equal for smoothness and solidity to entire granite—with such a provision, there cannot, in my opinion, be the shadow of a doubt (where the traffic is sufficient) that, by such means, the public might be very profitably conveyed at an average charge of ½d. per mile, at the safe, rational, and accommodating speed of 10 or 12 miles per hour.

Among experiments made some years ago by Mr. Walker, and quoted

by Mr. Telford, on the granite track in the Commercial-road, a strong pony, weighing 4½ cwts., drew, on an incline of 1 in 116, 6 tons, exerting a power equal to 191 lbs.; a powerful horse, weighing 14 cwts., drew 12 tons, at 4 miles per hour, on the same incline, exerting a power equal to 382 lbs. After this most extraordinary exhibition and demonstration, who can doubt—what rational being will deny—the possibility, either with or without tracks, the final success of steam-carriages on good turnpike-roads.—THOMAS MOTLEY: *Stangate, Lambeth, 8 mo.* 3.

P.S.—It should be observed, that Sir James Anderson does not propose to go up incline planes of 1 in 20 at the rate of 10 miles an hour—if need be, at one-fourth or one-half; by which means there will be a great difference in the effective power of the engine; and, as Sir James proposed this engine to be safely equal to upwards of 3000 lbs., I leave it to your intelligent readers to calculate what it will be able to effect at given velocities; assuming that 50 lbs. ought to move a ton, at 4 miles an hour, the engine ought to move about 60 tons at that speed, provided the wheels could get sufficient tractive adhesion, and double that load on a good level timber track.

LOCOMOTIVES ON COMMON ROADS.

SIR,—It is stated by an eminent writer on the steam-engine, that a bushel of coals, as applied to the drainage of the Cornish mines, usually raised 40,000 tons of water a foot high; and that a horse, worked in a fast stage coach, pulls against an average resistance of about a ¼ cwt. Against this he is enabled to work, at the usual speed, through about 8 miles daily; his work is, therefore, equivalent to 1000 tons, raised 1 ft. A bushel of coals, therefore, as used in Cornwall, performs as much labour as a day's work of 100 such horses. Engineers, consequently, to apply steam successfully to common road locomotion, have only to adopt, as far as practicable, the system carried out by Cornish engineers. Work steam highly expansively, clothe the cylinder, steam pipes, and condense the steam, by contact with the atmosphere (as patented by Mr. Craddock, or Trevithick), with a better mode of applying power to the driving-wheels; and a more perfect system of applying springs to the machinery is required, to prevent injury from shocks, or concussions on the road. If these points are carried out to the extent which our advanced state of engineering will enable them to be done, it will be found that steam-carriages may be worked on common roads, at a far cheaper rate than any other kind of conveyance.—THOMAS CLARKE: *Blackwall, Aug.* 3.

WESTERN-SUPER-MARE PIER COMPANY.

At the Wells Assizes, on Wednesday last, an action was tried, which had been brought by the Western-super-Mare Pier Company against Mr. Dredge, the engineer, of Bath, for not fulfilling a contract entered into by him to build a suspension-bridge (on the principle for which he had obtained a patent), in order to connect the main land at Weston-hill with the Island of Brainback, to recover back certain money paid to him. By a contract entered into on the 17th of April, 1847, the defendant undertook, for the sum of 10,000*l.*, to be paid by certain instalments, to build, complete, and finish the bridge by the 1st of May, 1848, for the plaintiffs. It was contended, that the defendant had undertaken to complete the works absolutely—this he had not done. The company had undertaken to pay certain instalments of the 10,000*l.* periodically, and 1400*l.*, two instalments, had been unpaid by them; and, in consequence thereof, the defendant abandoned the works, which became wholly useless. Several witnesses were called, who proved that the works from the commencement were so badly done that they could never stand, and that on the discontinuance of the works they become quite in ruins.

For the defendant, it was contended that the payment of the instalments was a condition precedent on the completion of the works; and that, so far as they had been proceeded with, they were properly constructed, and that the injury to them was in consequence of the high winds and tides affecting the works before they were continued above high-water mark. It also was contended, that work had been done by the defendant to a greater amount than 1400*l.*; and that, therefore, the plaintiffs were not entitled to recover.

Mr. Justice WILLIAMS having summed up, the jury, after considering for some time, found a verdict for the plaintiff, damages 1400*l.*

ATROCIOUS CONDUCT OF AN ENGINE DRIVER.—On the East Lancashire Railway works, at Tunnel End, near Burnley, on Friday, the driver and stoker of the *Medusa* locomotive were drinking, and had left the engine in charge of the cleaner, whose name is Rhodes. When he was about to take the fire out of the grate, some persons in authority came down to the engine, and, wishing to go to the tip end at Rose Grove, were taken thither by Rhodes. Shortly after Rhodes had left, the driver, named S. Whittle, came down to the works, and finding the engine gone without him, he was very much vexed, and determined to place some obstacles on the rails to obstruct the engine on its return. He accordingly got three tail boards, belonging to the dirt waggons, and placed them across the rails, and fastened them by driving iron picks behind the boards into the sleepers. He then got four iron furnace bars, and placed them across the rails, and afterwards more picks, to the number of eight, were struck into the sleepers, with the shafts upwards! By this time the engine was returning. The cleaner, Rhodes, sat in front of the coal-box; the Rev. T. G. James, his brother, Mr. James, of Liverpool; Mr. Donaldson, the engineer of the line, and another gentleman, being in the truck of the engine. Some person having noticed the obstructions made a signal to Rhodes to shut off the steam, and apply the break; but before he could do so, the wheels came in contact with the tail boards, and Rhodes was thrown off upon the line. The engine, too, was at first thrown off the rail, but, by some means, after having run a considerable distance, again came upon it. All the gentlemen in the truck fortunately kept their hold, and escaped unhurt; but Rhodes was doubled up by the engine, and on being examined, was found to have his right arm almost taken off, and both thighs broken. Mr. Smirthwaite, surgeon, of Burnley, was sent for, and amputated the arm above the elbow. The fractured thighs were also reduced, and there are hopes that Rhodes may eventually recover. Whittle was immediately taken into into custody, and, after a hearing before the magistrate on Saturday, he was committed for trial.

THE CLERKS' AND GENERAL BENEFIT BUILDING SOCIETY AND SAVINGS FUND.—A public meeting of this excellently-constructed society was held at the office, Crosby-hall, Bishopsgate-street, on Wednesday night, to receive subscriptions, enrol fresh members, &c., and the rapid progress of the society was in both respects fully demonstrated. In the absence of the respected chairman (Mr. E. Devonshire) Mr. J. A. JOSEPH (secretary to the Australian Mining Company) presided, and recited the objects of building societies, also with the legitimate means of accomplishing them, as for the first time proposed by this particular one. Another director followed with an excellent moral lecture, as to the manner in which members of the society might turn the advantages to be derived from it to the best account; and Mr. TOOLE (the experienced secretary) having entered into a clear exposition of the improvements introduced by the society into its general construction and management, a vote of thanks was passed to the chairman, and the meeting broke up.

LONDON AND BRIGHTON RAILWAY.—At a meeting of shareholders desirous of promoting reforms in the management of this railway, held on Monday last, upwards of 100 proprietors attended, and a series of six resolutions were unanimously adopted:—viz.: 1. That the expenditure of the company had been improvident.—2. That advances of 20,000*l.* and of 23,000*l.*, respectively, to promote a steam-packet company, and the Direct London and Portsmouth Railway were misappropriations of the railway funds.—3. That the foregoing advances had been concealed, and that the accounts of the directors were consequently disentitled to confidence.—4. and 5. That certain statements of the chairman in Parliament, and also of the deputy chairman, regarding the sentiments of the proprietors, had been unfounded; and 6. That the growing revenue of the company, combined with economy, would justify the expectation of increasing dividends, and that the proprietors present pledge themselves to use their efforts to effect the necessary changes in the management.

RICHMOND AND WINDSOR.—This branch line of railway, extending from Richmond to the present terminus at Datchet (in connection with the South-Western Railway), which was to have been opened to Waterloo-bridge on Monday last, will not now be in working order for at least three weeks or a month, in consequence of some of the piers of the viaduct, extending across the Deer-park at Richmond, having sunk.

OPENING OF THE CALEDONIAN RAILWAY TO ARBROATH AND MONTROSE.—The Castlecary branch of this railway was opened for public traffic on Monday last, thus completing the direct line between London, Perth, Dundee, Arbroath, and Montrose. The express trains from Dundee arrived at the Euston-square terminus in 15 hours, and from Arbroath in 15¾ hours. The line is continued from Arbroath to Montrose—coaches conveying passengers on to Aberdeen.

THE BEGINNING OF THE LARGE MINERAL DEVELOPMENT AT MERTHYR.—The spirit of enterprise is making a rapid progress in some parts of South Wales. The mountains that divide the counties of Glamorgan and Brecon are found to contain inexhaustible mines both of iron and coal, fortunately placed by nature as close together as the workmen could desire. But the value of these articles is greatly diminished by the tedious land-carriage to Cardiff. However, this obstacle will be quickly removed by the zeal of the country, which displayed itself at a meeting held at Merthyr Tydvil, on Saturday, the 6th inst., when the gentlemen came to the resolution of forming a canal from Cardiff to Merthyr, and entered into a subscription for the execution of this great work.—*Bristol paper*, March 17, 1795.—[At this period, all the iron then then fabricated at Merthyr, was brought in waggons to Cardiff—relays of horses being kept at Quaker's Yard, Park Newydd, and at Duffryn Ffrwd Farm (Nantgarw).

THE NEW BRAZILIAN WAR FRIGATE.

We have before noticed the *Alfonzo*, as being a splendid ship—her engines are fine pieces of mechanism: they were built by Messrs. Benjamin Hicks and Son, of Bolton, on a new principle, with direct action, and are, together, of 350-horse power, but will work more with perfect safety. All the beams and frame-work are of wrought iron, and the appearance of the whole (including the brass, &c.), is like a huge and beautiful specimen of the finest polished clock-work. Cast-iron would be double the weight, and not so secure. The same builders constructed the engines of the *Fury*, but they have here introduced many improvements. A variety of brass-work is introduced, including motion-wheels to speed, or to reverse, the engine with great ease and alacrity. The diameter of each cylinder is 68 inches, and the stroke of the piston 5 feet. The immense cranks are also of wrought iron, and weigh each 18 cwts. They were bored, turned, and planed. A great deal of the usual cast-iron work is substituted by copper and brass, and the whole is exceedingly compact, highly finished, and beautifully bright. The condensing apparatus is novel in principle: the air-pumps, and the mode of admitting the injection water, are also quite new. The same may be said of the gearings, especially the eccentrics, which are curious and beautiful. Compared with another vessel of 350-horse power, on the usual principle (where cast-iron is employed), the saving will be at least one-third in weight, and the security will be one-half more. This, with general compactness, will more than compensate for the additional cost, which is considerable.

The boilers are on the flue principle, with fires at both ends. In the lower after engine-room there is "a donkey," of one-horse power, for pumping, &c. There is, also, in another part, a tank for the distilled water from the tubes, or steam-pipes.

SMOKE PROHIBITION BILL.—In the House of Commons, on Wednesday evening, Mr. BROTHERTON moved that the order of the day for the second reading of this bill be discharged.—Viscount MORPETH did not feel himself bound to oppose the motion, although he was prepared to have voted in favour of the second reading of the bill. He was most anxious to prevent the excessive emission of smoke. It would be very desirable that the subject should be taken into consideration next session.—The order was then discharged.

THE SMOKE NUISANCE.—Mr. C. W. Williams has just addressed the following letter to the editor of the *Liverpool Albion*:—"Being desirous of putting myself right with the public and the town council, I beg leave to notice, through your columns, the report of the proceedings at the Town-hall, on the 2d inst., in which my name is erroneously introduced. In this report, as given in the *Liverpool Journal*, of this day, is the following passage:—'A letter was received from Mr. Wye Williams, relative to the smoke nuisance, in which he stated that he had applied his apparatus with the best success to various boilers, and he was surprised to find that some persons seemed to think that smoke could not be effectually consumed. Mr. Danson thought, that if Mr. Williams were willing, as he seemed to be, to try his apparatus at his own risk, he ought to be permitted to do so, for there was a very considerable difference of opinion out of doors respecting the possibility of consuming smoke.' The letter there referred to was not written by me, but by some one in the name of J. Williams, but who, I believe, is innocent of the charge of either writing or inditing it. This report states that the writer 'was surprised to find that some persons seemed to think that smoke could not be effectually consumed.' Mr. Danson truly observed that 'there was considerable difference of opinion out of doors respecting the possibility of consuming smoke.' It is not surprising that such difference of opinion should exist, seeing how active Mr. J. Williams and others have been in placing their notions before the public, under colour of plans for consuming smoke. It is, indeed, to be regretted that such individuals have been so enabled to lead the public astray. Whatever may be the surprise of the writer of the letter, whoever he may be, or the difference of opinion among unscientific men, there is none among the first chemical authorities on the subject. Coal gas (carburetted hydrogen) can be burned and turned to heating purposes in the furnace, as well as the lamp, without the nuisance of smoke. When once formed, however, through the imperfect combustion of the gas, smoke cannot be burned, or converted to heating purposes. Smoke is incombustible, being composed of three incombustible bodies—namely, steam, carbonic acid, and nitrogen (all in large quantities), together with a comparatively small portion of disengaged carbon, the result of that very imperfect combustion. The process of burning the gas generated from coals in a furnace, just as in a lamp, and without smoke, consists solely in bringing the required volume of atmospheric air to the gas in the proper place and manner, and while the gas is at the proper high temperature. The public have already, and for many years, had the opportunity of witnessing this process in the stationary engine, Edge-hill, and also at the Harrington Water-Works, Soho-street. There is also a furnace and boiler erected expressly for the purpose of exhibiting the mode, practicability, and value of this simple and inexpensive process, at the Dublin Steam Company's Works, Clarence Dock, and which may be witnessed by any gentleman desirous of examining its details; this latter furnace being provided with suitable sight-holes, by which the interior of the flues may be examined, and, while in action, an inspection cannot fail of convincing the most sceptical of the practicability of abating the smoke nuisance. As I have no interest, directly or indirectly, in this matter, beyond that of seeing the nuisance abated, I trust the Liverpool authorities will not relax in those endeavours which have already been attended with such beneficial results."

ON THE APPLICATION OF WATER TO DIFFERENT KINDS OF FUEL.—From the unpublished papers of the late Brig. Gen. Sir S. Bentham:—"The important experiments lately made by Sir H. De la Beche on coal have superseded those which had been devised by Sir S. Bentham, who had considered it also desirable to ascertain the amount of heat afforded by other kinds of fuel, such as wood, peat, and especially oil, either alone, or together with wood or peat, as those articles are in some places to be procured at a cheap rate, where coal is not to be obtained; and, as a sequel to his observations, the following memorandum has been found amongst his papers:—'In regard to all, or most of these different kinds of fuel, there seems some reason to believe that an addition of water may be made to increase the quantity of heat produced by their combustion. Chemical analysis appears, in some respects, to confirm the experience of persons of various classes. The practice of throwing water on coals is general amongst blacksmiths; the wetting of ashes on throwing them on a coal fire is the usual practice of housewives; mixing green wood with dry, and wet clay with small coal, has been found advantageous in horticultural furnaces. Experience has, to my knowledge at Derby, and I believe elsewhere, shown the advantage of letting water flow into the ash-pit under the fire-place of a steam-engine. Besides which, a very intelligent agent of Mr. Strutt's, in his gas manufactory at Derby, has proved by continued experience, that in burning for fuel the kind of oil obtained from coal in the production of gas, more heat is generated by the addition of water than would be produced by the burning the oil without the water.' It seems proper to add on this subject, that Mr. Strutt, of Derby, nearly 20 years ago, at Sir Samuel's request, kindly caused a trial to be made in a common steam-engine fire-place of the effect of placing a trough of water in the ash-pit, and that in this way no addition of heat was perceptible, but a very decided advantage in preserving the fire-bars from rapid destruction. In some correspondence on the subject, it appears that Mr. Sylvester conceived, that as much heat would be lost in decomposing water, as was likely to be gained by burning the oxygen and hydrogen set at liberty; but the subject seems well worthy of accurate experiment."—*Mechanics' Mag.*

THE COENISH STEAM-ENGINE.—The following letter, signed by a "Cornish Miner, of Hayle Foundry," has been addressed to the *Mechanics' Magazine*:—"There are two works before the public intended as books of instruction to engineering students—*A Treatise on the Steam-Engine*, by Mr. Bourne, and *A Catechism*, by way of Supplement. I have been somewhat amused at the way in which the Cornish engine is treated in these works, and I would beg a small space in your pages to give the ingenious author a little advice, which may be of service to him in his future publications—viz.: before he attempts to describe any machine, to endeavour by all means to see it at work, and not trust to drawings and descriptions given by other people, for fear of being hoaxed. It is evident Mr. Bourne could never have seen a Cornish engine, otherwise he would not have made such mistakes—a writer whose talent and learning are so obvious throughout the rest of the work, where algebra, from simple equations up to the calculus, is scattered with a most profuse hand (I confess I can't always follow him in these things; yet of a surety they give the book a very learned appearance). In page 166 of the *Catechism*, after telling us that the centrifugal pump threatens to supersede pumps of every other description, Mr. Bourne says, 'the single-acting engine is a remnant of engineering barbarism, which must now be superseded by more compendious contrivances.' I must say, I feel great curiosity to see the compendious contrivance that is to supersede the Cornish engine. Mr. Bourne says, he has a substitute for the pump; and when he has a substitute for the engine, I hope he will lose no time in giving it to the public. I always had an idea that, other things being equal, the engine that did the most work with the least quantity of coals was the best engine; but Mr. Bourne thinks otherwise, for in page 48, he shows that the Cornish engine works with less coals by 3 or 4 lbs. per horse-power, so that if the water were pumped up by them merely to work one of Whitlaw and Stirrat's water-wheels, the power would be given out by them more economically than by the ordinary rotative engine. And I have no doubt, Mr. Editor, before Mr. Bourne has completed his compendious substitute, they will be applied for that purpose in cities, where small power only is required for domestic purposes, &c. But, after reperusing his description of the Cornish engine, I fancy I can tell what makes him call it a remnant of engineering barbarism. In page 169 of the *Treatise*, and page 137 of the *Catechism*, after describing the cataract, he says, 'and the plunger (*i. e.* the cataract plunger) in its descent opens the injection valve, which causes the engine to make a stroke. If the cock of the cataract be shut, it is clear the plunger cannot descend, and as in that case the injection valve cannot open, the engine must stand still; but, if the cock be slightly opened, the plunger will descend slowly, and the engine will make a gradual stroke, as it obtains water necessary for condensation.' Now, if any engine upon earth works like that, it is a remnant of barbarism sure enough! Somewhere also the author says, that 'a good Cornish engine should be capable of going 10 strokes per minute, or one stroke in 10 minutes.' But the idea of regulating the speed of an engine between those extremes by the injection cock, is too rich! I am sure whoever furnished Mr. Bourne with this description was guilty of a most barbarous experiment upon our author's credulity. I need not, however, tell your readers, that the speed of the engine is regulated by the cataract opening the steam exhaustion and equilibrium valves, and not the injection valve."

RAILWAYS IN INDIA.

The vast importance—nay, the imperative necessity—of carrying into our extensive and densely populated territories in the East Indies the benefits of the railway system, is now universally acknowledged, by all at all acquainted with the requirements and productions of this prolific country; and when to be commenced, and in what manner, appears now the only question. With a soil which yields in rich abundance all the precious productions of a tropical sun, with a density of population in parts unsurpassed in any country in Europe, and an industrious people, with perfect tranquility, there co-exists such a difficulty of transit, as to convert this luxuriousness into barrenness, to fetter commerce, and often to lay many portions of the country under the sufferings of absolute famine, whilst the most abundant plenty reigns a few miles distant—while food is spoiling and goods rotting for want of consuming. Overdrawn as this picture may appear, it is, nevertheless, true; and is occasioned by the bad roads—often absolutely impassable in rainy seasons—the heat of the climate, absence of bridges over rivers, and numerous other impediments. Among the several railway projects for India, which are to lay the foundation of this magnificent system, when complete, is the GREAT INDIAN PENINSULAR COMPANY, formed originally in 1845, for the construction of a grand trunk line across the centre of the Peninsula, from Bombay in the west, to Coringa on the eastern coast. Commencing at Bombay, it was to ascend the western Ghauts, and pass Ahmednuggar, into the valley of the Godavery; then traverse the plains which skirt that river, cross the Manjera river, following a number of fertile valleys to Kummummet, cross the Godavery a few miles above Rajamundry, and proceed to its terminus at Coringa. It was proposed that four branches should proceed from the main line, on the north, to Candeish, Nagpoor, and Oomrawutty, forming the first portions of lines to proceed to Calcutta and the Ganges, on the south to Sholapoor and Hyderabad, capable of being afterwards extended to Madras. It was intended to commence this great series of lines by one from Bombay to Alleh, 108 miles, with branches to the Pera river, and Mhuze—in all 176 miles. These plans were afterwards considerably modified in detail, in consequence of exact and very extensive investigation on the ground; accurate surveys were executed of near 200 miles of line, and careful examination, without instruments, of 700 miles more were effected. Ample information of the traffic, resources, wants, and condition of the country were also obtained from authentic and official sources. But, in consequence of the financial difficulties of that year, the proceedings of the company remained in abeyance; it is now proposed that a line shall be formed, as the first section of the whole, commencing at the port of Bombay, where there is a population of 300,000 inhabitants, and proceed thirty-five miles towards the producing districts of the interior, by Tannah to Kallian, places of considerable population and resort, on the route of one of the greatest channels of traffic in India. The caution money (30,000*l.*) has already been duly lodged with the East India Company, and interest is meanwhile accruing upon the same. The holders of the original shares, upon which the 5*s.* deposit has been paid, may have the amount of such deposits converted into paid-up shares of 5*l.* each—that is to say, one share of 5*l.* for 20 shares in their present form—and thus terminate their liability for any further payments; while, at the same time, they will become immediately entitled to the 5 per cent. interest guaranteed by the East India Company. This option, however, must be accepted before the 31st of August, after which all shares will be forfeited that shall not have been thus consolidated, or, in the other case, registered for the payment of the 4*l.* 15*s.* remaining due upon them—the capital thus being 500,000*l.* in 5*l.* shares; but should any obstacle arise to prevent the carrying out the project, the deposits will be returned, the interest being estimated as sufficient to cover current expenses.

PREVENTION OF COLLISION ON RAILWAYS.

An ingenious contrivance for preventing accidents on railways, and one that appears well worthy of notice, has been exhibited at the Polytechnic Institution for some weeks past. It differs from most arrangements of the kind in one important point—that is, to prevent collision, instead of lessening the shock when collison has taken place. This appears to be a move in the right direction. It is, perhaps, pretty well known that, by the existing arrangement, the services of the guard are required in stopping a train—the engine-driver not having the power of applying the breaks to the carriages; so that, in a case of emergency, if either of these officers be off his guard, it is so much valuable time lost; and let it be borne in mind, also, that the guard, individually, has no control over the train whilst the motive power is acting; and, although he is the one most likely to observe danger first, yet he can do nothing more than make signals to the engineer, so that he may understand that danger is at hand, and act accordingly—hence the many contrivances that have been put forth from time to time for enabling the guard to communicate with the engineer by signal; and again if they are both on the alert, and act the moment they observe danger, still the means at their command for stopping the train appear inadequate; and, in opposition to their exertions, the train runs on for a considerable distance.

Let us take the accident at the Shrivenham station, on the Great Western line, as an example. The distance the train run in that case from the time danger was observed, till it came in contact with the carriages on the line, was more than enough to enable the officers in charge of the train to stop it in perfect safety, if they had but the means at their command. This fact was proved by Sir George Cayley, some years since, experimentally. He showed that a train, proceeding with a velocity of 22 miles per hour, could be stopped within the space of 20 ft. in perfect safety, and for any increase of velocity in the same ratio; and yet, strange as it may appear, no plan has yet been put in practice to take advantage of this fact. A gentleman of the name of Bishop, however, has recently taken out a patent for a contrivance of this kind, which appears, by experiments with the models, to answer the purpose admirably. Perhaps, the following brief explanation will give some idea of the advantages of the contrivance:—Let it be understood, in the first case, that every carriage has the breaks attached to it; and that, by means of a bar, placed under the carriages, the breaks may be thrown in or out of action at pleasure; and that, when the train is made up, these bars would be connected from carriage to carriage—so that the engineer, by acting upon this bar at one end of the train, has the power of applying the breaks to every carriage simultaneously, converting, as it were, the whole train into a sledge. Let it also be understood, that the guard has the same power over these breaks as the engineer, rendering the one independent of the other; but what is still more important it gives the guard, as well as the engineer, full and efficient power to check the velocity of the train, or to stop it altogether—for it can be shown that the breaks, being applied to every wheel in a train, the power of any locomotive engine would not be sufficient to move it forward; and that, when the steam has been shut off, and the breaks applied, the train may be stopped within an incredibly short space. All these matters are fully demonstrated by the models that are exhibited; and it is to be hoped that, ere long, we shall find some such efficient contrivance upon every railway in the kingdom.

DIRECT LINE BETWEEN LONDON AND PARIS.—The recent opening of the Rouen and Dieppe Railway completes the most direct communication between the two capitals, the total distance, *viâ* Brighton, being 245 miles; that it is 100 miles less than the route by Southampton and Havre, and 40 miles less than that by Dover and Boulogne. The Dieppe line branches out of the Rouen and Havre Railway at Malaunay, about seven miles from Rouen, and traverses, the whole way to Dieppe, a beautiful country. The total length of the line is 30 miles. After leaving the junction it follows, *à demi côte*, the Vallée de Cleves. It then enters the Vallée de la Scie, which it traverses till within two miles of Dieppe, passing by St. Victor, Auffay, and Longueville, at each of which places stations have been built. The line quits this valley and enters the Vallée d'Argues by means of a tunnel a mile in length, and almost immediately arrives at the Dieppe station, which, when completed, will afford every accommodation for passengers and merchandise.

HUDDERSFIELD AND MANCHESTER RAILWAY.—The special jury case tried at the late York Assizes, in which Messrs. Nowell and Hattersley, railway contractors, were the plaintiffs, and the railway company the defendants, involved, we understand, no less a sum than 150,000*l.* The action was brought against the company to recover damages for their illegally seizing the plaintiffs' railway plant and works on the above-named railway; and, besides what is claimed in this action, the plaintiffs also claim of the company upwards of 100,000*l.*, for work done and materials supplied. A verdict was found for the plaintiffs, damages 150,000*l.*, subject to a reference to Mr. Currie, by whom the action and all matters at issue between the plaintiffs and defendants, and between the London and North-Western Railway Company (the Huddersfield and Manchester Railway being amalgamated in their stock), are to be decided.

BRITISH SMELTING ASSOCIATION.

CAPITAL £500,000, in 50,000 SHARES, of £10 EACH.

Provisionally Registered, pursuant to Act of Parliament, 7 and 8 Victoria, cap. 110.

AN INFLUENTIAL BOARD OF DIRECTORS IS IN COURSE OF FORMATION, AND WILL SHORTLY BE PUBLISHED. 64

This company is formed for the purpose of carrying on the smelting of British and Foreign Copper Ores, on the best and most economical principles. It is intended to apply the capital of the undertaking solely to the operations which are inseparable from that business.

The present smelting companies, few in number, and without competition, are the purchasers of nearly the whole of the ores raised in this country, as well as of that imported. The whole burden of carrying on the copper trade is, therefore, thrown upon them; and it is not to be wondered at, that the mining interest should have some reason to complain of a monopoly, when, from the existing state of things, the whole of the British and foreign ores is necessarily thrown into the hands of a few private companies.

It is well known that they realise immense profits; and, to prove this, the following statement of the Cornish and foreign copper ores, raised and sold during the years 1846 and 1847 respectively, may be given. Of the Cornish ores each different ticketing, during the year, has been calculated separately; but, for the sake of brevity, the results only are given:—

1846.

	Average Produce.	Av. price of pure Copper.	Quantity of Ore. 21 *cwts.*	Quantity of pure Copper. *Tons cwts.*	Amount paid for Ore. £ s. d.	Value of pure copper produced. £ s. d.	Gross Profits. £ s. d.
Cornish Ores	8	92	153,620	12,113 17	815,015 11 6	1,119,197 19 0	304,182 7 6
Foreign ditto (including regulus)	25	92	57,440	14,360 0	661,866 15 0	1,321,120 0 0	659,253 5 0
Totals			211,060	26,473 17	1,476,882 6 6	2,440,317 19 0	963,435 12 6
Deduct smelting charges, &c., at 17*l.* per ton of pure copper							450,055 8 0
Net profit, equal to 35 per cent.							£513,380 4 6

1847.

	Average Produce.	Av. price of pure Copper.	Quantity of Ore. 21 *cwts.*	Quantity of pure Copper. *Tons cwts.*	Amount paid for Ore. £ s. d.	Value of pure copper produced. £ s. d.	Gross Profits. £ s. d.
Cornish Ores	8	92	159,837	12,461 5	870,517 15 6	1,194,204 9 0	323,686 13 6
Foreign ditto (including regulus)	25	92	38,818	9,704 0	562,102 4 6	892,768 0 0	330,665 15 6
Totals			191,655	22,165 5	1,432,620 0 0	2,086,972 9 0	654,352 9 0
Deduct smelting charges, &c., at 17*l.* per ton of pure copper							376,809 10 0
Net profit, equal to 19 per cent.							£277,542 19 0

It appears, therefore, that, during the year 1846, the smelters realised, at least, 35 per cent. on copper ores alone, and in 1847, 19 per cent.—The falling off in the latter year is evidently, in a great measure, attributable to the decreased importation of foreign ores—the difference, compared with the previous year, being 18,622 tons. Upon foreign ores the largest profits are made; for, it must be remembered, that a considerable quantity, particularly that from Chili, comes in a state of regulus; and, although the smelter may actually give a higher price for it, yet, having gone through three of the processes required for smelting, the expenses of reducing it to pure copper are not so great as that of the rough Cornish ores. It is not acknowledged to be regulus, but, nevertheless, it is so, although entered under the designation of "ore."

The above statement is a very moderate one, as it is believed that, at Swansea, the ore may be smelted at a less cost.

The great complaint of the miners against the smelters is, that they do not get a fair price for their ores, in proportion to its produce, and the price of pure copper in the market—that is, it does not vary uniformly. The following table, compiled from data published in the *Mining Journal*, proves forcibly the justice of this complaint. It shows the different sales of the produce of the Cornish mines during the six months ending the 30th of June last, with the average standard, produce, price, and quantity of the ore, the quantity of fine copper, its price per ton, and the amount of net profits realised:—

PRODUCE OF CORNISH MINES FOR THE SIX MONTHS ENDING 30TH JUNE, 1849.

Date of Sale.	Average Standard. £ s. d.	Average Produce.	Average Price. £ s. d.	Quantity of Ore. 21 *cwts.*	Quantity of pure Copper. *Tons cwts.*	Amount paid for Ore. £ s. d.	Price of pure Copper.	Value of pure Copper. £ s. d.	Gross Profits.
January 6	99 1 0	8¼	5 8 0	3444	282 14	18,531 14 0	£97	27,426 15 0	
,, 13	94 6 0	9¼	5 17 0	2279	208 7	13,378 16 0	,,	20,202 19 0	
,, 20	87 14 0	10	6 0 0	2693	268 3	16,118 6 6	,,	26,010 11 0	
,, 27	101 5 0	7⅝	4 14 6	4210	311 12	19,976 4 6	,,	30,239 15 0	
February 3	102 19 0	7¼	4 19 0	4294	319 17	21,139 6 6	92	29,426 4 0	
,, 10	97 0 0	7⅛	5 17 0	2148	190 14	12,596 19 0	,,	17,549 0 0	
,, 17	91 7 0	10⅝	6 14 0	2506	259 3	16,787 8 0	,,	23,841 16 0	
,, 24	106 3 0	7¼	4 19 0	2637	192 5	13,163 7 6	,,	17,687 0 0	
March 2	102 16 0	7¼	5 7 6	3237	256 16	17,503 3 0	£87 10—88 10	22,550 0 0	
,, 9	97 13 0	8¼	5 16 0	2315	203 1	13,466 17 6	,, ,,	17,868 8 0	
,, 23	93 1 0	9¼	5 17 0	2922	271 7	17,223 3 6	,, ,,	23,878 16 0	
,, 30	100 11 0	7⅝	4 13 6	4852	357 16	22,639 3 6	,, ,,	31,468 8 0	
April 6	98 9 0	7¼	4 5 0	5080	360 3	21,498 12 0	,, ,,	31,693 4 0	
,, 13	89 3 0	9⅝	5 11 6	2493	232 19	13,912 12 6	,, ,,	20,499 12 0	
,, 20	84 10 0	9⅝	5 9 6	3012	292 1	16,402 10 6	,, ,,	25,700 8 0	
,, 27	94 16 0	7¼	4 3 0	2702	196 19	11,241 19 0	,, ,,	17,331 12 0	
May 4	92 2 0	8¼	4 17 0	3271	269 7	15,813 14 6	,, ,,	23,702 16 0	
,, 11	88 12 0	8¼	4 15 0	2594	221 14	12,510 14 6	,, ,,	19,509 12 0	
,, 18	81 17 0	10¼	5 10 0	2787	281 3	15,355 11 0	,, ,,	24,741 4 0	
,, 25	90 6 0	7⅝	3 19 0	4562	339 5	18,098 9 6	,, ,,	29,854 0 0	
June 1	92 4 0	7¼	3 17 0	3966	284 4	15,304 14 6	,, ,,	25,009 12 0	
,, 8	84 4 0	9⅝	5 2 0	1773	165 5	9,041 9 6	,, ,,	14,542 0 0	
,, 22	82 13 0	9¼	4 14 6	2926	290 5	15,951 3 6	,, ,,	25,542 0 0	
,, 29	93 19 0	7¼	4 1 6	2739	199 6	11,199 6 0	,, ,,	17,538 8 0	
Foreign ores		av. 8½ 25 (including regulus.)		75442	6254 6	379,848 6 6	Average £92	563,832 0 0	£183,983 13 6
				20258	5064 0	232,956 12 0	,, ,,	455,888 0 0	232,931 8 0
				95700	11318 6	612,804 18 6		1,029,720 0 0	£416,915 1 6
Deduct smelting charges, &c., at £17 per ton of pure copper									192,411 2 0
Net profit equal to 36 per cent. for half-year									£224,503 19 6

A single glance at this table will show, that, while the produce has been above the average (8½), and the average price of pure copper was the same as the average of 1846 and 1847, yet the prices given for the ore were remarkably low. The standard, certainly, has varied considerably, but that is fixed by the smelters themselves, and appears to have no regular or uniform rule. Take, for instance, the sale of the 30th of March—the produce is 7⅝, and the price of pure copper 92*l.* per ton, the price of the ore 4*l.* 13s. 6d., and the standard is 100*l.* 11s.; compare this with the sale of the 25th of May—the produce and the price of copper is the same as the former, but the standard is marked 90*l.* 6s., and the price of the ore is only 3*l.* 19s. It is evident, therefore, that the miner is subjected to great loss by the monopoly of the smelting trade—whether unavoidably or not, it is not necessary to say. The following are the total amounts of copper ore imported in each of the five years, ending 5th January, 1848:—

1843	*Tons* 54,370	1845	*Tons* 56,697
1844	58,405	1846	51,623
1847	*Tons* 41,490.		

From this it appears, that a large falling off took place last year—caused, in a great measure, by the duty which is at present imposed upon foreign ores; but a bill being now before Parliament for its reduction, and which will probably repeal it, it may confidently be expected that a much larger quantity will again be imported. The principal decrease has taken place in the ores imported from Chili and Cuba, whence the largest quantities come; while there has been a considerable increase from Australia and New Zealand, although the supplies from that quarter are only commencing. There can be no doubt also, that the falling off in the import from Cuba is attributable, to some extent, to failures in the production from the mines; and, probably, this is true as to Chili, though a portion of the copper ore of that country may, in consequence of the duty, have been smelted there, or in America, instead of coming here:—

	Chili.	Cuba.	Australia and New Zealand.
1843	*Tons* 19,825	31,683	42
1844	19,566	34,764	134
1845	10,823	41,341	1109
1846	13,565	31,766	3303
1847	9,222	23,835	5795

If, therefore, the reduction of the duty cause the importations from Chili and Cuba to increase, it is probable that the total importations will be considerably larger than they ever were; while, it will be observed, as regards the returns from Australia and New Zealand, such have increased from 134 tons, in 1844, to 5795 tons in the past year (1847); at the same time that other mines, among which are those on the island of Kawaw, near Auckland, belonging to the North British Australasian Company, which are only now coming into active operation—10 to 12 tons per day being raised therefrom, as appears by advices received some time ago, and the whole island containing lodes of extreme richness. From this source alone a large additional supply may be expected. The rich mines of South Australia are too well known to require any comment.

It may fairly be expected, therefore, that the smelting trade will be considerably increased; and, in ordinary times, the demand for copper will be fully equal to any supply that may take place.

In the above estimates, the smelting and other charges for making a ton of pure copper, according to the usual process at Swansea, has been taken at 17*l.*; but it is well known that it does not, in general, cost the smelters so much. Even at that rate, however, it is evident that their net profits are upwards of 30*l.* per cent. It is considered advisable that this company should adopt any recent improvements in the smelting of copper, by which it may be done more economically, and at the same time as efficiently.

It will also be of great advantage, if works already erected can be obtained, either on lease or by purchase, in order that operations may be commenced with as little delay as possible, and thus make an early return to the shareholders. For that purpose, inquiries are now being made at, and in the neighbourhood of, Swansea; but when the board of directors is formed, the question of the locality of the works will be taken into consideration. Practical and experienced men will also be selected as agents and superintendents.

At present money is very abundant in this country, but, from a general want of confidence in the safety of most investments, it is kept comparatively idle, and only a small rate of interest can be obtained for its use on the best securities.

In bringing this undertaking before the public, the directors confidently recommend it as an investment of no ordinary security, and one which, it has been proved, will yield a large profit.

A call of 2*l.* per share will be made on complete registration; 2*l.* per share payable six months after complete registration, and the remaining calls as may be found necessary—but three months, at least, will be allowed between each payment, and one month's notice will be given.

Communications may, in the meantime, be addressed to Messrs. Dacie and Son, solicitors, 18, King's Arms-yard, London.

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